

REPORT

OF THE

BUREAU OF MINES

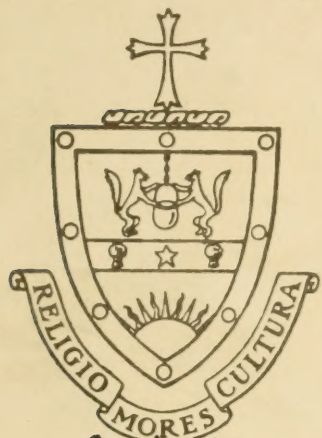
OF THE

Department of Internal Affairs
of Pennsylvania

1902

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LETTER OF TRANSMITTAL

Bureau of Mines,

April 15, 1903.

Hon. James W. Latta, Secretary of Internal Affairs:

Sir: In accordance with section 5 of an act establishing a Bureau of Mines in the Department of Internal Affairs, approved July 15, 1897, I have the honor to herewith submit the Report of the Bureau of Mines for the year ending December 31, 1902, together with the reports of the Anthracite and Bituminous Inspectors.

Very respectfully,

JAMES E. RODERICK,
Chief of Bureau of Mines.

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REPORT
OF THE
BUREAU OF MINES

COMMUNICATION

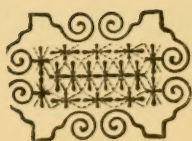
Department of Internal Affairs,
Harrisburg, April 18, 1903.

To His Excellency, Samuel W. Pennypacker, Governor of Pennsylvania:

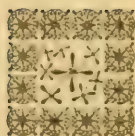
Sir: In compliance with the requirements of the act of June 2, 1891, and that of May 15, 1893, relative to the Mine Inspectors' Reports of the Anthracite and Bituminous coal regions, I have the honor to present to you for transmission to the General Assembly the Report of the Bureau of Mines for the year 1902.

Very respectfully,

JAMES W. LATTA,
Secretary of Internal Affairs.



LAWS RELATING
TO
COAL MINING



Anthracite Mining Laws of Pennsylvania.

LAWS RELATING TO COAL MINING.

AN ACT

To provide for the health and safety of persons employed in and about the anthracite coal mines of Pennsylvania and for the protection and preservation of property connected therewith.

ARTICLE I.

Section 1. Be it enacted, &c., That this act shall apply to every anthracite coal mine or colliery in the Commonwealth, provided the said mine or colliery employs more than ten (10) persons.

ARTICLE II.

Inspectors and Inspection Districts.

Section 1. The counties of Susquehanna, Wayne, Luzerne, Lackawanna, Carbon, Schuylkill, Northumberland, Columbia, Lebanon and Dauphin, or so much of them as may be included under the provisions of this act, shall be divided into eight (8) inspection districts as follows:

Section 2. First. All that portion of the Lackawanna coal field lying northeast of East and West Market streets in the city of Scranton, and of Slocum and Drinker streets in the borough of Dunmore, including the coal fields of Susquehanna and Wayne counties.

Second. That portion of the Lackawanna coal field in Lackawanna county lying southwest of East and West Market streets in the city of Scranton, and west of Slocum and Drinker streets in the borough of Dunmore.

Third. That portion of the Wyoming coal field situated in Luzerne county, east of and including Plains and Kingston townships.

Fourth. The remaining portion of the Wyoming coal field west of Plains and Kingston townships, including the city of Wilkes-Barre and the boroughs of Kingston and Edwardsville.

Fifth. That part of Luzerne county lying south of the Wyoming coal field together with Carbon county.

Sixth. That part of the Schuylkill coal field in Schuylkill county lying north of the Broad Mountain and east of a meridian line through the centre of the borough of Girardville.

Seventh. That part of the Schuylkill coal field in Schuylkill county lying north of the Broad Mountain and west of a meridian line through

the centre of the borough of Girardville, together with Columbia, Northumberland and Dauphin counties.

Eighth. All that part of the Schuylkill coal field in Schuylkill county lying south of the Mahanoy Valley, and the county of Lebanon.

Section 3. In order to fill any vacancy that may occur in the office of Inspector of Mines by reason of expiration of term, resignation, removal for cause or from any other reason whatever, the judges of the court of Lackawanna county shall appoint an examining board for the counties of Susquehanna, Wayne and Lackawanna, and the judges of the court of Luzerne county shall appoint an examining board for the counties of Sullivan, Carbon and Luzerne, and the judges of Schuylkill county shall appoint an examining board for the counties of Schuylkill, Northumberland, Lebanon, Columbia and Dauphin.

Section 4. The said Board of Examiners shall be composed of three reputable coal miners in actual practice and two reputable mining engineers, all of whom shall be appointed at the first term of court in each year, to hold their places during the year. Any vacancies that may occur in the Board of Examiners shall be filled by the court as they occur. The said Board of Examiners shall be permitted to engage the services of a clerk, and they, together with the clerk, shall each receive the sum of five dollars per day for every day they are actually engaged in the discharge of their duties under this appointment, and mileage at the rate of six cents per mile from their home to the place of meeting and return by the nearest practicable railway route.

Section 5. Whenever candidates for the office of inspector are to be examined, the said examiner shall give public notice of the fact in not more than five papers published in the inspection district and at least two weeks before the meeting, specifying the time and place where such meeting shall be held. The said examiners shall be sworn to a faithful discharge of their duties, and four of them shall agree in their recommendation of all candidates to the Governor who have answered ninety per centum of the questions; the names of the applicants, the questions asked and answers thereto shall be sent to the Secretary of the Commonwealth, and published in at least two local papers, daily or weekly, and shall recommend only such applicants as they find qualified for the office.

Should the Board of Examiners not be able to agree in their selection and recommendation of a candidate, the judges of the court of common pleas shall dissolve the said board and appoint a new board of like qualifications and powers.

Upon the recommendation of the Board of Examiners as aforesaid, the Governor shall appoint such person or persons to fill the office

of inspector of mines under this act, and shall issue to him a commission for the term of five years, subject, however, to removal for neglect of duty or malfeasance in office as hereinafter provided for.

Section 6. The person so appointed must be a citizen of Pennsylvania and shall have attained the age of thirty years. He must have a knowledge of the different systems of working coal mines, and he must produce satisfactory evidence to the Board of Examiners of having had at least five (5) years' practical experience in anthracite coal mines of Pennsylvania. He must have had experience in coal mines where noxious and explosive gases are evolved.

Before entering upon the duties of his office he shall take an oath or affirmation before an officer properly qualified to administer the same, that he will perform his duties with fidelity and impartiality; which oath or affirmation shall be filed in the office of the prothonotary of the county. He shall also provide himself with the most modern instruments and appliances for carrying out the intentions of this act.

Section 7. The salary of each of the said inspectors shall be three thousand dollars per annum, which salary, together with the expense incurred in carrying into effect the provisions of this act, shall be paid by the State Treasurer out of the Treasury of the Commonwealth upon the warrant of the Auditor General.

Section 8. In case the inspector becomes incapacitated to perform the duties of his office, for a longer period than two weeks, it shall be the duty of the judges of the court of common pleas to depute some competent person recommended by the Board of Examiners to fill the office of inspector until the said inspector shall be able to fulfill the duties of his office and the person so appointed shall be paid in the same manner as is provided for the Inspector of Mines.

Section 9. Each of the said inspectors shall reside in the district for which he is appointed, and shall give his whole time and attention to the duties of the office. He shall examine all the collieries in his district as often as his duties will permit or as often as the exigencies of the case or the condition of the mines require it; see that every necessary precaution is taken to secure the safety of the workmen and that the provisions of this act are observed and obeyed; attend every inquest held by the coroner, or his deputy, upon the bodies of persons killed in or about the collieries in his district; visit the scene of the accident for the purpose of making an examination into the particulars of the same whenever loss of life or serious personal injury occurs as elsewhere herein provided for, and make an annual report of his proceedings to the Secretary of Internal Affairs of the Commonwealth at the close of every year, enumerating all the accidents in and about the collieries of his district, marking in tabular form those accidents causing death or serious personal injury,

the condition of the workings of the said mines with regard to the safety of the workmen therein and the ventilation thereof, and the result of his labors generally shall be fully set forth.

Section 10. The Board of Examiners, each for its respective district as hereinbefore provided for, in order to divide more equitably among the several mine inspectors the labor to be performed and the territory to be covered by them in the performance of the duties of the office, may, at any time when they shall deem it desirable or necessary, readjust the several districts by the creation of new boundary lines, thereby adding to or taking from, as the case may be, the districts as at present bounded and described, if the court having jurisdiction approve the same.

And in case it shall be deemed desirable or necessary to readjust any contiguous district, comprised by more than one judicial district, by the creation of new boundary lines, then in such case the examining boards of the territory affected or requiring such adjustment, shall, in joint session, make such change or readjustment as they shall jointly agree upon, if the nearest court having jurisdiction to the territory affected to whom the said joint examining boards shall submit the matter, shall approve the same.

Section 11. The mine inspector shall have the right, and it is hereby made his duty to enter, inspect and examine any mine or colliery in his district and the workings and machinery belonging thereto, at all reasonable times, either by day or night, but not so as to impede or obstruct the working of the colliery, and shall have power to take one or more of his fellow inspectors into or around any mine or colliery in the district for which he is appointed, for the purpose of consultation or examination.*

He shall also have the right and it is hereby made his duty, to make inquiry into the condition of such mine or colliery workings, machinery, ventilation, drainage, method of lighting or using lights and into all matters and things connected with or relating to, as well as to make suggestions providing for the health and safety of persons employed in or about the same, and especially to make inquiry whether the provisions of this act have been complied with.

The owner, operator or superintendent of such mine or colliery is hereby required to furnish the means necessary for such entry, inspection, examination, inquiry and exit.

The inspector shall make a record of the visit, noting the time and material circumstances of the inspection.

Section 12. No person who shall act or practice as a land agent or as the manager or agent of any coal mine or colliery, who is peculiarly interested in operating any coal mine or colliery in his district, shall, at the same time, hold the office of inspector of mines under this act.

Section 13. Whenever a petition signed by fifteen or more reputable coal operators or miners, or both, setting forth that any inspector of mines neglects his duties, or is incompetent, or is guilty of malfeasance in office, it shall be the duty of the court of common pleas of the proper county to issue a citation in the name of the Commonwealth to the said inspector to appear at not less than five days' notice, on a day fixed, before said court and the court shall then proceed to inquire into and investigate the allegations of the petitioners. If the court find that said inspector is neglectful of his duties or that he is incompetent to perform the duties of the office, for any cause that existed previous to his appointment or that has arisen since his appointment, or that he is guilty of malfeasance in office, the court shall certify the same to the Governor of the Commonwealth, who shall declare the office of inspector for the district vacant and proceed, in compliance with the provisions of this act, to appoint a properly qualified person to fill the office.

The cost of said investigation shall be borne by the removed inspector; but if the allegations in the petition are not sustained the costs shall be paid by the petitioners.

Section 14. The maps and plans of the mines and the records thereof, together with all the papers relating thereto, shall be kept by the inspector, properly arranged and preserved, in a convenient place in the district for which each inspector has been appointed, and shall be transferred by him with any other property of the Commonwealth that may be in his possession, to his successor in office.

Section 15. The persons who, at the time this act goes into effect, are acting as inspectors of mines under the acts hereby repealed shall continue to act in the same manner as if they had been appointed under this act, and until the term for which they were appointed has expired.

ARTICLE III.

Surveys, Maps and Plans.

Section 1. The owner, operator or superintendent of every coal mine or colliery shall make, or cause to be made, an accurate map or plan of the workings or excavations of such coal mine or colliery, on a scale of one hundred feet to the inch, which map or plan shall exhibit the workings or excavations in each and every seam of coal and the tunnels and passages connecting with such workings or excavations. It shall state in degrees the general inclination of the strata with any material deflection therein in said workings or excavations, and shall also state the tidal elevations of the bottom of each and every shaft, slope, tunnel and gangway, and of any other point in the mine or on the surface where such elevation shall be deemed necessary by the inspector. The map or plan shall show the number of the last survey station and date of each survey on the

gangways or the most advanced workings. It shall also accurately show the boundary lines of the lands of the said coal mine or colliery and the proximity of the workings thereto, and in case any mine contains any water dammed up in any part thereof, it shall be the duty of the owner, operator or superintendent to cause the true location of the said dam to be accurately marked on said map or plan, together with the tidal elevation, inclination of strata and area of said workings containing water, and whenever any workings or excavations is approaching the workings where such dam or water is contained or situated, the owner, operator or superintendent shall notify the inspector of the same without delay.

A true copy of which map or plan the said owner, operator or superintendent shall deposit with the inspector of mines for the district in which the said coal mine or colliery is situated, showing the workings of each seam, if so desired by the inspector, on a separate sheet of tracing muslin. One copy of the said map or plan shall be kept at the colliery.

Section 2. The said owner, operator or superintendent shall, as often as once in every six months place, or cause to be placed, on the said Inspector's map or plan of said coal mine or colliery, the plan of the extensions made in such coal mine or colliery during the preceding six months. The said extensions shall be placed on the inspector's map and the map returned to the inspector within two months from the date of the last survey.

Section 3. When any coal mine or colliery is worked out preparatory to being abandoned, or when any lift thereof is about to be abandoned, the owner, operator or superintendent of such coal mine or colliery shall have the maps or plans thereof extended to include all excavations, as far as practicable, and such portions thereof as have been worked to the boundary lines of adjoining properties; or any part or parts of the workings of which is intended to be allowed to fill with water, must be surveyed in duplicate and such surveys must practically agree, and certified copies be filed with the inspector of the district in which the mines are situated.

Section 4. Whenever the owner, operator or superintendent of any coal mine or colliery shall neglect or refuse, or from any cause not satisfactory to the inspector, shall fail, for a period of three months, to furnish to the inspector the map or plan of said colliery or of the extensions thereto, as provided for in this act, the inspector is hereby authorized to cause an accurate map or plan of such coal mine or colliery to be made at the expense of the owner thereof, which cost shall be recoverable from said owner as other debts are by law recoverable.

Section 5. If the inspector finds or has reason to believe, that any map or plan of any coal mine or colliery, furnished under the provisions of this act, is materially inaccurate, it shall be his duty to make

application to the court of common pleas of the county in which such colliery is situate for an order to have an accurate map or plan of said colliery prepared, and if such survey shall prove that the map furnished was materially inaccurate or imperfect, such owner, operator or superintendent shall be liable for the expense incurred in making the same.

Section 6. If it shall be found that the map or plan furnished by the owner, operator or superintendent was not materially inaccurate or imperfect, the Commonwealth shall be held liable for the expense incurred in making such test survey.

Section 7. If it shall be shown that the said owner, operator or superintendent has knowingly or designedly caused or allowed such map or plan, when furnished, to be incorrect or false, such owner, operator or superintendent thus offending, shall be guilty of a misdemeanor and upon conviction thereof, shall be punished by a fine not exceeding five hundred dollars or imprisonment not exceeding three months, at the discretion of the court.

Section 8. The maps or plans of the several coal mines or collieries in each district and which are placed in the custody of the inspector, shall be the property of the Commonwealth, and shall remain in the care of the inspector of the district in which the said collieries are situated to be transferred by him to his successor in office; and in no case shall a copy of the same be made without the consent of the owner, operator or superintendent.

Section 9. The inspector's map or plan of any particular colliery shall be open for inspection, in the presence of the inspector, to any miner or miners of that colliery, whenever said miner or miners shall have cause to fear that his or their working place or places is becoming dangerous, by reason of its proximity to other workings which may be supposed to contain water or dangerous gases. Said map shall also be open to the inspection and examination of any citizen interested, during business hours.

Section 10. It shall be obligatory on the owners of adjoining coal properties to leave, or cause to be left, a pillar of coal in each seam or vein of coal worked by them, along the line of adjoining property, of such width, that taken in connection with the pillar to be left by the adjoining property owner, will be a sufficient barrier for the safety of the employes of either mine in case the other should be abandoned and allowed to fill with water; such width of pillar to be determined by the engineers of the adjoining property owners together with the inspector of the district in which the mine is situated, and the surveys of the face of the workings along such pillar shall be made in duplicate and must practically agree. A copy of such duplicate surveys, certified to, must be filed with the owners of the adjoining properties and with the inspector of the district in which the mine or property is situated.

ARTICLE IV.

Shafts, Slopes, Openings and Outlets.

Section 1. It shall not be lawful for the owner, operator or superintendent of any mine to employ any person or persons in such mine or permit any person or persons to be in such mine for the purpose of working therein, unless they are in connection with every seam or stratum of coal; and from every lift thereof, worked in such mine, not less than two openings or outlets, separated by a strata of not less than sixty (60) feet in breadth underground, and one hundred and fifty (150) feet in breadth at the surface, at which openings or outlets safe and distinct means of ingress and egress are at all times available for the person or persons employed in the said mine, but it shall not be necessary for the said two openings to belong to the same mine if the persons employed therein have safe, ready and available means of ingress and egress by not less than two openings. This section shall not apply to opening a new mine or to opening any new lift of a mine while being worked for the purpose of making communication between said two outlets, so long as not more than twenty persons are employed at any one time in such mine or new lift of a mine; neither shall it apply to any mine or part of a mine in which the second outlet has been rendered unavailable by reason of the final robbing of pillars previous to abandonment, so long as not more than twenty persons are employed therein at any one time. The cage or cages and other means of egress shall, at all times, be available for the persons employed where there is no second outlet.

Section 2. The owner, operator or superintendent of any mine to which there is only one shaft, slope or outlet may petition the court of common pleas in and for the county in which such mine is situated, which said court is hereby empowered to act in the premises, setting forth that, in consequence of intervening lands between the working of his mine and the most practicable point, or the only practicable point, as the case may be, at which to make or bring to the surface from the working of his mine, he is unable to make an additional shaft, slope or outlet in accordance with the requirements of this act, whereupon the court may make an order of reference and appoint three disinterested persons, residents of the county, viewers, one or more of whom shall be a practical mining engineer, all of whom, after being sworn to a faithful discharge of their duties, shall view and examine the premises and determine as to whether the owner shall have the privilege of making an additional outlet through or upon any intervening lands, as the case may require, and report in writing to the court, which report shall be entered and filed of record. If the finding of the viewers, or any two of them, is in favor of the owner of such coal mine or colliery,

he may make an additional shaft, slope or outlet under, through or upon intervening lands, as may be determined upon and provided for by the award. If the finding of the viewers is against the owner, or if no award be made by reason of any default or neglect on the part of the owner, he shall be bound to comply with the provisions of this act in the same manner as if this section had not been enacted. In case the said owner, operator or superintendent desires to, and claims that he ought to make an additional opening under, through or upon any adjoining or intervening lands, to meet the requirements of this act, for the ingress and egress of the men employed in his or their mine, he or they shall make a statement of the facts in the petition, with a survey, setting forth the point of commencement and the point of termination of the proposed outlet which he or they, their engineers, agents or employes may enter upon said intervening lands and survey and mark, as he or they shall find it proper to adopt for such additional outlet, doing as little damage as possible to the property explored; and the viewers shall state in their report what damage will be sustained by the owner or owners of the intervening lands by the opening, constructing and using of the outlet, and if the report is not appealed from, it shall be confirmed or rejected by said court as to right and justice shall appertain, and any further and all proceedings in relation thereto shall be in conformity with like proceedings as in the case of a lateral railroad across or under intervening lands, under the act in relation to lateral railroads, approved the fifth day of May, Anno Domini one thousand eight hundred and thirty-two, and the supplements thereto, so far as the provisions of the same are applicable hereto; and the notices to the owner of intervening lands, of the intention to apply for the privilege of making an outlet and meeting of the viewers shall be given, and the costs of the case shall be paid as provided in the said act of fifth day of May, Anno Domini one thousand eight hundred and thirty-two, and the supplements thereto.

Section 3. The escapements, shafts or slopes shall be fitted with safe and available appliances by which the persons employed in the mine may readily escape in case an accident occurs deranging the hoisting machinery at the main outlets.

Section 4. In slopes where the angle of inclination is fifteen degrees or less there must be provided a separate traveling way, which shall be maintained in a safe condition for travel and kept free from steam and dangerous gases.

Section 5. No inflammable structure, other than a frame to sustain pulleys or sheaves, shall be erected over the entrance of any opening connecting the surface with the underground workings of any mine, and no "breaker" or other inflammable structure for the preparation or storage of coal shall be erected nearer than two hun-

dred (200) feet to any such opening, but this act shall not be construed to prohibit the erection of a fan drift for the purpose of ventilation, or of a trestle for the transportation of cars from any slope to such breaker or structure, neither shall it apply to any shaft or slope until the work of development and shipment of coal has commenced: Provided, That this section shall not apply to breakers that are now erected.

Section 6. The top of each shaft and also of each slope, if dangerous, or any intermediate lift thereof, shall be securely fenced off by railing or by vertical or flat gates.

Section 7. Every abandoned slope, shaft, air-hole and drift shall be properly fenced around or across its entrance.

Section 8. All underground entrances to any places not in actual course of working or extension shall be properly fenced across the whole width of such entrances, so as to prevent persons from inadvertently entering the same.

Section 9. The owner, operator or superintendent of any coal mine or colliery which is worked by shaft or slope, shall provide and maintain a suitable appliance by or through which conversation can be held by and between persons at the bottom and at the top of the shaft or slope, and also an efficient means of signaling from the bottom of such shaft or slope to the engineer in charge of the hoisting engine.

Section 10. Hand rails and efficient safety catches shall be attached to, and a sufficient cover overhead shall be provided on every cage used for lowering or hoisting persons in any shaft.

Section 11. Wherever practicable, every cage or gun-boat used for lowering or hoisting persons in any slope, shall be provided with a proper protector, so constructed that persons, while on such cage or gun-boat, shall not be struck by anything which may fall or roll down said slope.

Section 12. The main link of the chain connecting the rope to the cage, gun-boat or car in any shaft or slope, shall be made of the best quality of iron; bridle chains made of the same quality of iron shall be attached to the main link, rope or rope socket from the cross-head of the cage or gun-boat when persons are being lowered or hoisted thereon.

Section 13. The ropes, safety catches, links and chains shall be carefully examined every day they are used, by a competent person delegated for that purpose and any defects therein found, by which life or limb may be endangered, shall be immediately remedied.

Section 14. An efficient brake shall be attached to every drum that is used for lowering or raising persons or material in any mine.

Section 15. Flanges or horns of sufficient dimensions to prevent the rope from slipping off the said drum shall be provided and properly attached to the drum, and all machines used for lowering or

hoisting persons in mines shall be provided with an indicator to show the position of the cage, car or gun-boat in the shaft or slope.

Section 16. Over all shafts which are being sunk or shall hereafter be sunk, a safe and substantial structure shall be erected to sustain the sheaves or pulleys, at a height of not less than twenty (20) feet above the tipping-place, and the top of such shaft shall be arranged in such manner that no material can fall into the shaft while the bucket is being emptied.

Section 17. The said structure shall be erected as soon as a substantial foundation is obtained, and in no case shall a shaft be sunk to a depth of more than fifty (50) feet without such structure.

Section 18. If provision is made to land the bucket upon truck, the said truck shall be constructed in such manner that material cannot fall into the shaft.

Section 19. All rock and coal from shafts as they are being sunk, shall not be raised except in a bucket or on a cage, and such bucket or cage must be connected to the rope or chain by a safety hook, clevis or other safe attachment.

Section 20. Such shafts shall be provided with guides and guide attachments applied in such manner as to prevent the bucket from swinging while descending or ascending therein, and such guides and guide attachments shall be maintained at a distance of not more than seventy-five (75) feet from the bottom of such shaft, until its sinking shall have been completed, but this section shall not apply to shafts one hundred (100) feet or less in depth.

Section 21. Where the strata are not safe every shaft shall be securely cased, lined or otherwise made secure.

Section 22. The following rules shall be observed, as far as practicable, in every shaft to which this act applies.

First. After each and every blast the chargeman must see that all loose material is swept down from the timbers before the workmen descend to their work.

Second. After a suspension of work, and also after firing a blast in a shaft where explosive gases are evolved, the person in charge must have the said shaft examined and tested with a safety lamp before the workmen are allowed to descend.

Third. Not more than four persons shall be lowered or hoisted in any shaft on a bucket at the same time, and no person shall ride on a loaded bucket.

Fourth. Whenever persons are employed on platforms in shafts the person in charge must see that the said platforms are properly and safely constructed.

Fifth. While shafts are being sunk all blasts therein must be exploded by an electric battery.

Sixth. Every person who fails to comply with or who violates the provisions of this article shall be guilty of an offense against this act.

ARTICLE V.

Boilers and Connections, Machinery, &c.

Section 1. All boilers used for generating steam in and about mines and collieries shall be kept in good order, and the owner, operator or superintendent shall have them examined and inspected by a qualified person as often as once in six months, and oftener if needed. The result of such examination, under oath, shall be certified in writing to the inspector for the district within thirty (30) days thereafter.

Section 2. It shall not be lawful to place any boiler or boilers, for the purpose of generating steam, under nor nearer than one hundred (100) feet to any coal breaker or other structure in which persons are employed in the preparation of coal: Provided, That this section shall not apply to boilers or breakers already erected.

Section 3. Each nest of boilers shall be provided with a safety valve of sufficient area for the steam to escape and with weights or springs properly adjusted.

Section 4. Every boiler house shall be provided with a steam gauge properly connected with the boilers, to indicate the steam pressure, and another steam gauge shall be attached to the steam pipe in the engine house and placed in such position that the engineer or fireman can readily examine them and see what pressure is carried. Such steam gauges shall be kept in good order, tested and adjusted as often as once in every six months and their condition reported to the inspector in the same manner as the report of boiler inspection.

Section 5. All machinery used in or about the mines and collieries, and especially in breakers, such as engines, rollers, wheels, screens, shafting and belting shall be protected by covering or railing so as to prevent persons from inadvertently walking against or falling upon the same. The sides of stairs, trestles and dangerous plank walks in and around the collieries shall be provided with hand and guard railing to prevent persons from falling over their sides. This section shall not forbid the temporary removal of a fence, guard rail or covering for the purpose of repairs or other operations, if proper precautions are used, and the fence, guard rail or covering is replaced immediately thereafter.

Section 6. A sober and competent person, not under eighteen (18) years of age, shall be engaged to run the breaker engine and he shall attend to said engine while the machinery is in motion.

Section 7. A signal apparatus shall be established at important points in every breaker so that in case of an accident the engineer can be promptly notified to stop the machinery.

Section 8. No person under fifteen (15) years of age shall be appointed to oil the machinery, and no person shall oil dangerous parts of such machinery while it is in motion.

Section 9. No person shall play with, loiter around or interfere with any machinery in or about any mine or colliery.

Section 10. Failure to comply with the provisions of this article shall be deemed an offense against this act.

ARTICLE VI.

Wash Houses.

Section 1. It shall be the duty of the owner, operator or superintendent of each mine or colliery, at the request in writing of twenty or more men employed in any of the mines, to provide a suitable building, not an engine or boiler house, which shall be convenient to the principal entrance of such mine, for the use of the persons employed therein for the purpose of washing themselves and changing their clothes when entering the mine and returning therefrom. The said building shall be maintained in good order, be properly lighted and heated, and supplied with pure cold and warm water, and shall be provided with facilities for persons to wash. If any person or persons shall neglect or fail to comply with the provisions of this article, or maliciously injure or destroy, or cause to be injured or destroyed, the said building, or any part thereof, or any of the appliances or fittings used for supplying light, heat and water therein, or doing any act tending to the injury or destruction thereof, he or they shall be deemed guilty of an offense against this act.

ARTICLE VII.

Ambulances and Stretchers.

Section 1. The owner, operator or superintendent of every mine or colliery, except as hereinafter provided, shall provide and keep at such mine or colliery an ambulance and also at least two (2) stretchers, for the purpose of conveying to their places of abode, any person or persons who may be injured while in the discharge of his or their work at such mine or colliery.

Section 2. The said ambulance shall be constructed upon good, substantial and easy springs. It shall be covered and closed and shall have windows on the sides or ends. It shall be of sufficient size to convey at least two (2) injured persons with two (2) attendants at one time, and shall be provided with spring mattresses or other comfortable bedding to be placed on roller frames, together with sufficient covering and protection and convenient movement of the injured. It shall also be provided with seats for the attendants. The stretchers shall be constructed of such material and in such manner as to afford the greatest ease and comfort in the carriage of the injured person.

Section 3. Whenever any person or persons employed in or about a mine or colliery shall receive such injury by accident or otherwise, while so employed, as would render him or them unable to walk to

his or their place of abode, the owner, operator or superintendent of such mine or colliery shall immediately cause such person or persons to be removed to his or their place of abode or to an hospital as the case may require.

Section 4. It is provided, however, that the owner, operator or superintendent of any mine or colliery shall be excepted from the requirements of an ambulance, as aforesaid, if the places of abode of all the workmen at such mine or colliery be within a radius of a half mile from the principal entrance to such mine.

Section 5. It is provided further, that where two or more mines or collieries are located within one mile of each other, or the ambulance is located within one mile of each colliery, but one ambulance, as aforesaid, shall be required, if the said mines or collieries have ready and quick means of communication, one with the other, by telegraph or telephone.

Section 6. An ambulance, as aforesaid, shall not be required at any mine or colliery in which less than twenty (20) persons are employed.

Section 7. In case the distance from any mine or colliery to the place of abode of the person injured, is such as to permit his conveyance to his home or to an hospital more quickly and conveniently by railway, such mode of conveyance shall be permitted, but in such case the conveyance must be under cover and the comfort of the injured person must be provided for.

ARTICLE VIII.

Certified Mine Foremen.

Section 1. It shall not be lawful, neither shall it be permitted, for any person or persons to act as mine foreman or assistant mine foreman of any coal mines or colliery, unless they are registered as a holder of a certificate of qualification or service under this act.

Section 2. Certificates of qualification to mine foremen and assistant mine foremen shall be granted by the Secretary of Internal Affairs to every applicant who may be reported by the examiners, as hereinafter provided, as having passed a satisfactory examination and as having given satisfactory evidence of at least five years' practical experience as a miner, and of good conduct, capability and sobriety.

The certificate shall be in manner and form as shall be prescribed by the Secretary of Internal Affairs, and a record of all certificates issued shall be kept in his department.

Section 3. For the purpose of examination of candidates for such certificates, a board of examiners shall be appointed in each of the inspection districts provided for by this act. The said board shall consist of the district inspector of mines, two (2) practical miners and one owner, operator or superintendent of a mine. The said in-

spector shall act ex-officio, and the said engineer and owner, operator or superintendent shall be appointed in like manner and at the same time as the boards of examiners for candidates for mine inspectorship under this act are now appointed. The said board shall act as such for the period of one year from the date of their appointment. Meetings of the board may be held at any time, and they may make such rules and conduct such examinations as in their judgment may seem proper for the purpose of such examinations. The said board shall report their action to the Secretary of Internal Affairs, and at least three (3) of the members thereof shall certify to the qualification of each candidate who has passed such examination. The traveling expenses of the members of such board to and from their place of meeting, together with the sum of five dollars per day each to the said two (2) practical miners and owner, operator or superintendent, members of each board, for each day they are actually engaged therein, not exceeding ten (10) days in all, during the year, shall be paid by the Commonwealth on an order of the Auditor General drawn on the State Treasurer upon the certificate of the mine inspector, member of such board.

Section 4. Certificates of qualification to mine foreman and assistant mine foreman shall be granted by the Secretary of Internal Affairs to every applicant who may be reported by the examiners, as heretofore provided, as having passed a satisfactory examination and as having given satisfactory evidence of at least five (5) years' practical experience as a miner, and of good conduct, capability and sobriety. The certificate shall be in manner and form as shall be prescribed by the Secretary of Internal Affairs, and a record of all certificates issued shall be kept in the department. Certificates of qualification and certificates of service shall contain the full name, age and place of birth of the applicant, as also the length and nature of his previous service in or about the mines.

Section 5. Before certificate as aforesaid shall be granted applicants for same shall pay to the Secretary of Internal Affairs the following fee, namely:

For examination, one dollar; for registration of certificate, one dollar, for certificate, one dollar. All fees so received shall be covered into the treasury of the Commonwealth.

Section 6. No mines shall be operated for a longer period than thirty days without the supervision of a mine foreman. In case any mine is worked a longer period than thirty (30) days without such certified mine foreman, the owner, operator or superintendent thereof shall be subject to a penalty of twenty dollars per day for each day over the said thirty (30) days during which the said mine is operated.

Section 7. In case of the loss or destruction of a certificate the Secretary of Internal Affairs may supply a copy thereof to the person

losing the same upon the payment of the sum of fifty (50) cents: Provided, It shall be shown to the satisfaction of the Secretary that the loss has actually occurred.

Section 8. If any person or persons shall forge or counterfeit a certificate or knowingly make or cause to be made any false statement in any certificate under this act, or in any official copy of the same, or shall urge others to do so, or shall utter or use any such forged or false certificate, or unofficial copy thereof, or shall make, give, utter, produce or make use of any false declaration, representation or statement in any such certificate or copy thereof, or any document containing the same, he or they shall be guilty of a misdemeanor, and upon conviction thereof, shall be fined two hundred dollars, or imprisoned for a term not exceeding one (1) year, or both, at the discretion of the court trying the case.

Section 9. And no person shall be permitted to act as fire boss in any coal mine or colliery, except he has had five (5) years' practical experience in mines as a miner, three (3) of which he shall have as a miner wherein noxious and explosive gases are evolved, and the said fire boss shall certify to the same before entering upon his duties, before an alderman, justice of the peace or other person authorized to administer oaths, and a copy of said deposition shall be filed with the district inspector of mines wherein said person is employed.

ARTICLE IX.

Employment of Boys and Females.

Section 1. No boy under the age of fourteen (14) years, and no woman or girl of any age, shall be employed or permitted to be in any mine for the purpose of employment therein. Nor shall a boy under the age of twelve years or a woman or girl of any age, be employed or permitted to be in or about the outside structures or workings of a colliery for the purpose of employment, but it is provided, however, that this prohibition shall not affect the employment of a boy or female of suitable age in an office or in the performance of clerical work at a colliery.

Section 2. When an employer is in doubt as to the age of any boy or youth applying for employment in or about a mine or colliery, he shall demand and receive proof of the said lawful employment age of such boy or youth, by certificate from the parent or guardian, before said boy or youth shall be employed.

Section 3. If any person or persons contravene or fail to comply with the provisions of this act in respect to the employment of boys, young male persons or females, or if he or they shall connive with or permit others to contravene or fail to comply with said provisions, or if a parent or guardian of a boy or young male person make or give a false certificate of the age of such boy or young male person, or knowingly do or perform any other act for the purpose of secur-

ing employment for a boy or young male person under the lawful employment age and in contravention of the provisions of this act, he or they shall be guilty of an offense against this act.

ARTICLE X.

Ventilation.

Section 1. The owner, operator or superintendent of every mine shall provide and maintain a constant and adequate supply of pure air for the same, as hereinafter provided.

Section 2. It shall not be lawful to use a furnace for the purpose of ventilating any mine wherein explosive gases are generated.

Section 3. The minimum quantity of air thus produced, shall not be less than two hundred (200) cubic feet per minute for each and every person employed in any mine, and as much more as the circumstances may require.

Section 4. The ventilating currents shall be conducted and circulated to and along the face of each and every working place throughout the entire mine, in sufficient quantities to dilute, render harmless and sweep away smoke and noxious or dangerous gases, to such an extent that all working places and traveling roads shall be in a safe and fit state to work and travel therein.

Section 5. All worked out or abandoned parts of a mine in operation, so far as practicable, shall be kept free of dangerous bodies of gases or water, and if found impracticable to keep the entire mine free from an accumulation of gases or water, the mine inspector must be immediately notified.

Section 6. Every mine employing more than seventy-five (75) persons must be divided into two or more districts. Each district shall be provided with a separate split of pure air and the ventilation shall be so arranged, that not more than seventy-five persons shall be employed at the same time in any one current or split of air.

The inlet and return air passages for any particular district must be separated by a pillar of coal or stone, if the thickness and dip of the vein will permit, except where it is necessary to cut through said dividing pillar for the purposes of ventilation, traffic or drainage.

Section 7. All air passages shall be of sufficient area to allow the free passage of not less than two hundred (200) cubic feet of air per minute for every person working therein; and in no case, in mines generating explosive gases, shall the velocity exceed four hundred and fifty (450) lineal feet per minute, in any opening through which the air currents pass, if gauze safety lamps are used, except in the main inlet or outlet air ways.

Section 8. All cross-cuts connecting the main inlet and outlet air passages of every district, when it becomes necessary to close them permanently, shall be substantially closed with brick or other

suitable building material, laid in mortar or cement whenever practicable, but in no case shall said air stoppings be constructed of plank except for temporary purposes.

Section 9. All doors used in assisting or in any way affecting the ventilation shall be so hung and adjusted that they will close automatically.

Section 10. All main doors shall have an attendant whose constant duty it shall be to open them for transportation and travel and prevent them from standing open longer than is necessary for persons or cars to pass through.

Section 11. All main doors shall be so placed that when one door is open, another, which has the same effect upon the same current, shall be and remain closed and thus prevent any temporary stoppage of the air current.

Section 12. An extra main door shall be so placed and kept standing open, so as to be out of reach of accident, and so fixed that it can be at once closed in the event of an accident to the doors in use.

Section 13. The frame work of such main doors shall be substantially secured in stone or brick, laid in mortar or cement unless otherwise permitted in writing by the inspector.

Section 14. All permanent air bridges shall be substantially built of such material and such strength as the circumstances may require.

Section 15. The quantities of air in circulation shall be ascertained with an anemometer or other efficient instrument; such measurements shall be made by the inside foreman or his assistant once a week at the inlet and outlet airways, also at or near the face of each gangway and at the nearest cross-heading to the face of each gangway and at the nearest cross-heading to the face of the inside and outside chamber or breast where men are employed, and the headings shall not be driven more than sixty (60) feet from the face of each chamber or breast and shall be entered in the colliery report book.

Section 16. A report of these air measurements shall be sent to the inspector before the twelfth day of each month, for the preceding month, together with a statement of the number of persons employed in each district.

Section 17. All ventilators used at mines shall be provided with recording instruments by which the speed of the ventilators or the ventilating pressure shall be registered for each hour, and such data shall be preserved at the colliery for future reference, for a period of three months.

Section 18. Any person or persons who shall neglect or fail to comply with the provisions of this article, or who shall make any false report in regard to air measurements, shall be guilty of an offense against this act.

ARTICLE XI.

Props and Timbers.

Section 1. It shall be the duty of the owner, operator, superintendent or mine foreman of every mine to furnish to the miners all props, ties, rails and timbers necessary for the safe mining of coal and for the protection of the lives of the workmen. Such props, ties, rails and timbers shall be suitably prepared and shall be delivered to the workmen as near to their working places as they can be conveyed in ordinary mine cars, free of charge.

Section 2. Every workman in want of props, ties, rails or timbers shall notify the mine foreman or his assistant of the fact at least one day in advance, giving the length of the props or timber required; and in case of danger from loose roof or sides, he shall not continue to cut or load coal until the said props and timber have been properly furnished and the place made secure.

Section 3. A failure to comply with the provisions of this article shall be deemed an offense against this act, and shall be taken to be negligence per se on the part of the owner, operator, superintendent or mine foreman, as the case may be, of such mine, in action for the recovery of damages for accidents resulting from the insufficient propping of such mine, through failure to furnish the necessary props or timbers.

ARTICLE XII.

General Rules.

The following general rules shall be observed in every mine to which this act applies:

Rule 1. The owner, operator or superintendent of a mine or colliery shall use every precaution to ensure the safety of the workmen in all cases, whether provided for in this act or not, and he shall place the underground workings thereof, and all that is related to the same, under the charge and daily supervision of a competent person who shall be called "mine foreman."

Rule 2. Whenever a mine foreman cannot personally carry out the provisions of this act so far as they pertain to him, the owner, operator or superintendent shall authorize him to employ a sufficient number of competent persons to act as his assistants, who shall be subject to his orders.

Rule 3. The mine foreman shall have charge of all matters pertaining to ventilation, and the speed of the ventilators shall be particularly under his charge and direction; and any superintendent who shall cause the mine foreman to disregard the provisions of this act shall be amenable in the same manner as the mine foreman.

Rule 4. All accessible parts of an abandoned portion of a mine in which explosive gases have been found, shall be carefully examined

by the mine foreman or his assistants at least once a week, and all danger found existing therein shall be immediately removed. A report of said examination shall be recorded in a book kept at the colliery for that purpose and signed by the person making the same.

Rule 5. In mines generating explosive gases, the mine foreman or his assistant shall make a careful examination every morning of all working places and traveling roads and all other places which might endanger the safety of the workmen, before the workmen shall enter the mine, and such examination shall be made with a safety lamp within three (3) hours at most, before time for commencing work, and a workman shall not enter the mine or his working place until the said mine or part thereof and working place are reported to be safe. Every report shall be recorded without delay in a book which shall be kept at the colliery for the purpose and shall be signed by the person making the examination.

Rule 6. The person who makes said examination shall establish proof of the same by marking plainly the date thereof at the face of each working place and all other places examined.

Rule 7. A station or stations shall be established at the entrance to each mine or different parts of each mine, as the case may require, and a workman shall not pass beyond any such station until the mine or part of the mine beyond the same has been inspected and reported to be safe. It shall be the duty of the fire boss to remain at the danger station until relieved by some person authorized by himself or the mine foreman, who shall stand guard until said mine or part of mine shall be reported safe, and he shall not let any person pass without permission from the fire boss.

Rule 8. If at any time it is found by the person for the time being in charge of the mine or any part thereof, that by reason of noxious gases prevailing in such mine or such part thereof, or of any cause whatever the mine or the said part is dangerous, every precaution shall be used to ensure the safety of the workmen; and every workman, except such persons as may be required to remove the danger, shall be withdrawn from the mine, or such part thereof as is so found dangerous, until the said mine or said part thereof is examined by a competent person and reported by him to be safe.

Rule 9. In every working approaching any place where there is likely to be accumulation of explosive gases, or in any working in which danger is imminent from explosive gases, no light or fire other than a locked safety lamp shall be allowed or used. Whenever safety lamps are required in any mine they shall be the property of the owner of said mine, and a competent person, who shall be appointed for the purpose, shall examine every safety lamp immediately before it is taken into the workings for use, and ascertain it to be clean, safe and securely locked, and safety lamps shall not be used until they

have been so examined and found safe, clean and securely locked, unless permission be first given by the mine foreman to have the lamps used unlocked.

Rule 10. No one, except a duly authorized person, shall have in his possession a key or any other contrivance for the purpose of unlocking any safety lamp in any mine where locked lamps are used. No lucifer matches or any other apparatus for striking light shall be taken into said mine or parts thereof.

Rule 11. No blast shall be fired in any mine where locked safety lamps are used except by permission of the mine foreman or his assistants, and before a blast is fired, the person in charge must examine the place and adjoining places and satisfy himself that it is safe to fire such blast before such permission is given.

Rule 12. The mine foreman or his assistant shall visit and examine every working place in the mine at least once every alternate day, while the men of such place are or should be at work, and shall direct that each and every working place is properly secured by props or timber, and that safety in all respects is assured by directing that all loose coal or rock shall be pulled down or secured, and that no person shall be permitted to work in an unsafe place unless it be for the purpose of making it secure.

Rule 13. The mine foreman, or some other competent person or persons to be designated by him, shall examine at least once every day all slopes, shafts, main roads, traveling ways, signal apparatus, pulleys and timbering and see that they are in safe and efficient working condition.

Rule 14. Any person having charge of a working place in any mine shall keep the roof and sides thereof properly secured by timber or otherwise so as to prevent such roof and sides from falling, and he shall not do any work or permit any work to be done under loose or dangerous material except for the purpose of securing the same.

Rule 15. Whenever a place is likely to contain a dangerous accumulation of water, the working approaching such place shall not exceed twelve (12) feet in width, and there shall be constantly kept, at a distance of not less than twenty (20) feet in advance, at least one (1) bore hole near the center of the working and sufficient flank bore holes on each side.

Rule 16. No person shall ride upon or against any loaded car, cage or gun-boat in any shaft, slope or plane in or about a mine or colliery.

Rule 17. Not more than ten (10) persons shall be hoisted or lowered at any one time in any shaft or slope, and whenever five persons shall arrive at the bottom of any shaft or slope in which persons are regularly hoisted or lowered they shall be furnished with an empty car or cage and be hoisted, except however, in mines where there is

provided a traveling way having an average pitch of fifteen (15) degrees or less and not more than one thousand (1,000) feet in length. This, however, shall not prohibit the hoisting or lowering of twenty (20) persons at one time on slopes where two (2) or more loaded cars are regularly hoisted: Provided, That not less than thirty (30) workmen working therein, make such request in writing, to the inspector of the district, and if, in his judgment, the hoisting appliances in every respect are of sufficient strength, he may comply with the request of the workmen.

Provided, That in any coal mine or colliery where the hoisting appliances are not of sufficient strength to hoist or lower the number of persons named, he shall have the power to reduce the number of persons to be hoisted or lowered.

Rule 18. An engineer placed in charge of an engine whereby persons are hoisted or lowered in any mine, shall be a sober and competent person of not less than twenty-one (21) years of age.

Rule 19. Every engineer shall work his engine slowly and with great care when any person is being lowered or hoisted in a shaft or slope and no one shall interfere with or intimidate him while in the discharge of his duties.

Rule 20. An engineer who has charge of the hoisting machinery by which persons are lowered or hoisted in a mine, shall be in constant attendance for that purpose during the whole time any person or persons are below ground, and he shall not allow any person or persons, except such as may be deputed by the owner, operator or superintendent, to handle or meddle with the engine under his charge or any part of its machinery.

Rule 21. When any person is about to descend or ascend a shaft or slope, the headman or footman, as the case may be, shall inform the engineer by signal or otherwise of the fact, and the engineer shall return a signal before moving or starting the engine. In the absence of a headman or footman the person or persons about to descend or ascend shall give and receive the signals in the same manner.

Rule 22. The owner, operator or superintendent of a colliery shall place a competent person to be called "outside foreman," in charge of the breaker and the outside work of such colliery and who shall direct, and as far as practicable, see that the provisions of this act are complied with in respect to the breaker, outside machinery, ropes, cages and all other things pertaining to the outside work, unless otherwise provided for in this act.

Rule 23. In all coal breakers where the coal dust is so dense as to be injurious to the health of persons employed therein, the owner, operator or superintendent of said breaker shall, upon the request of the inspector, immediately adopt measures for the removal of the dust, as far as practicable.

Rule 24. Any miner or other workman who shall discover anything wrong with the ventilating current or with the condition of the roof, side, timber or roadway, or with any other part of the mine in general, such as would lead him to suspect danger to himself or his fellow workmen or to the property of his employer, shall immediately report the same to the mine foreman or other person, for the time being in charge of that portion of the mine.

Rule 25. Any person or persons who shall knowingly or wilfully damage, or without proper authority, remove or render useless any fencing, means of signaling, apparatus, instrument or machine, or shall throw open or obstruct any airway, or open a ventilating door and not have the same closed, or enter a place in or about a mine against caution, or carry fire, open lights or matches in places where safety lamps are used, or handle without proper authority, or disturb any machinery or cars, or do any other act or thing whereby the lives or health of persons or the security of the property in or about a mine or colliery are endangered, shall be guilty of an offense against this act.

Rule 26. Gunpowder or any other explosive shall not be stored in a mine, and a workman shall not have at any time in any one place, more than one keg or box containing twenty-five (25) pounds, unless more is necessary for a person to accomplish one day's work.

Rule 27. Every person who has gunpowder or other explosive in a mine, shall keep it in a wooden or metallic box securely locked, and such box shall be kept at least ten (10) feet from the tracks in all cases where room at such a distance is available.

Rule 28. Whenever a workman shall open a box containing explosive or while in any manner handling the same, he shall first place his lamp not less than five (5) feet from such explosive and in such a position that the air current cannot convey sparks to it, and a workman shall not approach nearer than five (5) feet to an open box containing powder, with a lamp, lighted pipe or any other thing containing fire.

Rule 29. When high explosives other than gunpowder are used in any mine, the manner of storing, keeping, moving, charging and firing or in any manner using such explosives, shall be in accordance with special rules as furnished by the manufacturers of the same. The said rules shall be endorsed with his or their official signature and shall be approved by the owner, operator or superintendent of the mine in which such explosives are used.

Rule 30. In charging holes for blasting in slate or rock in any mine, no iron or steel-pointed needle shall be used, and a tight cartridge shall not be rammed into a hole in coal, slate or rock with an iron or steel tamping bar, unless the end of the tamping bar is tipped with at least six (6) inches of copper or other soft metal.

Rule 31. A charge of powder or any other explosive in slate or rock which has missed fire shall not be withdrawn or the hole reopened.

Rule 32. A miner or other person who is about to explode a blast by the use of patent or other squibs or matches, shall not shorten the match, nor saturate it with mineral oil, nor turn it down when placed in the hole, nor ignite it except at its extreme end, nor do anything tending to shorten the time the match will burn.

Rule 33. When a workman is about to fire a blast he shall be careful to notify all persons who may be in danger therefrom, and shall give sufficient alarm before and after igniting the match so that any person or persons who may be approaching shall be warned of the danger.

Rule 34. Before commencing work and also after the firing of every blast, the miner working a breast or any other place in a mine, shall enter such breast or place to examine and ascertain its condition, and his laborer or assistant shall not go to the face or such breast or place until the miner has examined the same and found it to be safe.

Rule 35. No person shall be employed to blast coal or rock unless the mine foreman is satisfied that such person is qualified, by experience and judgment, to perform the work with ordinary safety.

Rule 36. A person who is not a practical miner shall not charge or fire a blast in the absence of an experienced miner, unless he has given satisfactory evidence of his ability to do so with safety, and has obtained permission from the mine foreman or person in charge.

Rule 37. An accumulation of gas in mines shall not be removed by brushing where it is practicable to remove it by brattice.

Rule 38. When gas is ignited by blast or otherwise, the person igniting the same shall immediately extinguish it, if possible, and notify the mine foreman or his assistant of the fact, and workmen must see that no gas blowers are left burning upon leaving their working places.

Rule 39. Every fireman in charge of a boiler or boilers for the generation of steam, shall keep a constant watch of the same. He shall see that the steam pressure does not at any time exceed the limit allowed by the outside foreman or superintendent. He shall frequently try the safety valve, and shall not increase the weight on the same. He shall maintain a proper depth of water in each boiler, and if anything should happen to prevent this, he shall report the same without delay to the foreman, for the time being in charge, and take such other action as may under the particular circumstances be necessary for the protection of life and preservation of property.

Rule 40. At every shaft or slope in which provision is made in this act for lowering and hoisting persons, a headman and footman

shall be designated by the superintendent or foreman to be at their proper places from the time that persons begin to descend, until all the persons who may be at the bottom of said shaft or slope when quitting work shall be hoisted. Such headman and footman shall personally attend to the signals and see that the provisions of this act, in respect to lowering and hoisting persons in shafts or slopes, shall be complied with.

Rule 41. No person, except the man giving the signal, shall jump on a car, cage or gunboat after the signal to start has been given, and if any person should enter a car, cage or gunboat in excess of the lawful number the headman or footman shall notify him of the fact and request him to get off, which request must be immediately complied with. Any violation of this rule must be reported promptly to the mine foreman.

Rule 42. An empty trip shall be hoisted in any shaft or slope where the engine has been standing idle for an hour or more, before men are hoisted or lowered in said shafts or slopes, and no person or persons shall ascend any shaft or slope when working on the night turn, until one trip shall first be hoisted therein.

Rule 43. Every passage-way used by persons in any mines and also used for transportation of coal or other material, shall be made of sufficient width to permit persons to pass moving cars with safety, but if found impracticable to make any passage-way of sufficient width, then holes of ample dimensions, and not more than one hundred and fifty (150) feet apart, shall be made on one side of said passage-way. The said passage-way and safety holes shall be kept free from obstructions and shall be well drained; the roof and sides of the same shall be made secure.

Rule 44. When locomotives are used in any mine their speed shall not exceed six (6) miles per hour, and an efficient alarm shall be provided and attached to the front end of every train of cars pushed by a locomotive in any mine or part of a mine.

Rule 45. Locomotives propelled by steam, if using fire, shall not be used in any passage-way which is also used as an in-take air-way to any mine or part of a mine where persons are employed, unless there be a sufficient quantity of air circulating therein to maintain a healthy atmosphere.

Rule 46. No person shall couple or uncouple loaded or empty cars while the same are in motion: Provided however, That this shall not apply to the top or bottom men of slopes, planes or shafts.

Rule 47. When cars are run on gravity roads by breaks or sprags, the runner shall only ride on the rear end of the last car, and when said cars are run by sprags, a space of not less than two (2) feet from the body of the car shall be made on one or both sides of the track, wherever it may be necessary for the runner to pass along the side

of the moving car or cars, and said space or passage-way shall always be kept free from obstructions.

Rule 48. No miner or laborer shall run cars out of any breast or chamber or on any gravity road unless he is a suitable person, employed by the mine foreman for that particular work; and no person shall be employed by any mine foreman to perform such work, under the age of sixteen (16) years.

Rule 49. Safety holes shall be made at the bottom of all slopes and planes and be kept free from obstruction to enable the footman to escape readily in case of danger.

Rule 50. Safety blocks or some other device for the purpose of preventing cars from falling into a shaft or running away on a slope or plane, shall be placed at or near the head of every shaft, slope or plane, and said safety blocks or other device must be maintained in good working order.

Rule 51. No person shall travel on any gravity train while cars are being hoisted or lowered thereon. Whenever ten (10) persons arrive at the bottom or top of any plane on which it is necessary for men to travel, traffic thereon shall be suspended for a period of time long enough to permit them to reach the top or bottom of said plane.

Rule 52. No mine cars shall be used in any mine unless the bumpers are of sufficient length and width to keep the bodies of said cars separated by not less than twelve (12) inches when the cars stand on a straight level road and the bumpers touch each other.

Rule 53. It shall be the duty of the owner, operator or superintendent of any or all coal breakers, to have them properly heated in order to prevent injury to the health of persons employed therein.

Rule 54. For the purpose of making known the rules and the provisions of this act to all persons employed in or about such mine or colliery to which this act applies, an abstract of the act and rules shall be posted up in legible characters in some conspicuous place or places at or near the mine or colliery, where they may be conveniently read by the persons employed, and so often as the same becomes obliterated or destroyed the owner, operator or superintendent shall cause them to be renewed with all reasonable dispatch. Any person who pulls down, injures or defaces such abstract of the act or rules when posted up in pursuance to the provisions of this act, shall be guilty of an offense against this act.

Rule 55. No person or persons working in any coal mine or colliery shall cut any props or timbers while the same are in position to support the roof or sides. When it becomes necessary to remove any of the said props or timbers for the purpose of mining coal that may be supported by the same, to dislodge any of the said props or timbers, it must be done by blasting.

Rule 56. It shall not be lawful for any mine foreman or superintendent of any mine or colliery to employ any person who is not com-

petent to understand the regulations of any mine evolving explosive gases: Provided, That this rule will not apply to a section of mine, free from the said explosive gases.

Rule 57. Any superintendent or mine foreman who prevents the footman from giving an empty car or cage to the number of men designated in a former rule, shall, upon information by any person engaged in the mines, given the mine inspector, be fined the sum of fifty dollars for each offense.

Rule 58. Every person who fails to comply with any of the foregoing rules or any of the provisions of this article, shall be guilty of an offense against this act.

ARTICLE XIII.

Inquests.

Section 1. Whenever loss of life to a miner or other employe occurs in or about a mine or colliery, notice thereof shall be given promptly to the inspector of mines for the district in which the accident occurred, by the mine foreman or outside foreman or other person having immediate charge of the work at the time of the accident; and when death results from personal injury such notice shall be given promptly after the knowledge of death comes to the said foreman or person in charge.

Section 2. Whenever loss of life occurs or whenever the lives of persons employed in a mine or at a colliery are in danger from any accident, the inspector of mines shall visit the scene of the accident as soon as possible thereafter and offer such suggestions, as in his judgment shall be necessary, to protect the lives and secure the safety of the persons employed. In case of death from such accident, and after examination he finds it necessary that a coroner's inquest shall be held, he shall notify the coroner to hold such inquest without delay, and if no such inquest be held by the coroner within twenty-four (24) hours after such notice, the inspector shall institute a further and fuller examination of such accident, and for this purpose he shall have power to compel the attendance of witnesses at such examination and to administer oaths and affirmations to persons testifying thereat. The inspector shall make a record of all such investigations and accidents, which record shall be preserved in his office. The costs of such investigation shall be paid by the county in which the accident occurred in like manner as costs of inquests held by coroners or justices of the peace are now paid.

Section 3. An inquest held by the coroner upon the body of a person killed by explosion or other accident, shall be adjourned by the coroner if the inspector of mines be not present to watch the proceedings, and the coroner in such case shall notify the inspector, in

writing, of such adjourned inquest, and the time and place of holding the same, at least three (3) days previous thereto.

Section 4. Due notice of an intended inquest to be held by the coroner, shall be given by the coroner to the inspector, and at any such inquest the inspector shall have the right to examine witnesses.

Section 5. If, at any inquest held over the body or bodies of persons whose death was caused by an accident in or about a mine or colliery, the inspector be not present, and it is shown by the evidence given at the inquest that the accident was caused by neglect or by any defect in or about the mine or colliery, which in the judgment of the jury, requires a remedy, the coroner shall send notice in writing to said inspector of such neglect or default.

Section 6. No person who is interested personally, nor a person employed in the mine or at a colliery in or at which loss of life has occurred by accident, shall be qualified to serve on a jury empaneled on the inquest, and a constable or other officer shall not summon such a person so qualified as juror, but the coroner shall empanel a majority of the jury from miners who are qualified to judge of the nature of the accident; every person who fails to comply with the provisions of this article shall be guilty of an offense against this act.

ARTICLE XIV.

Returns, Notices, Et Cetera.

Section 1. Notices of death or serious injuries resulting from accidents in or about mines or collieries, shall be made to the inspector of mines, in writing, and shall specify the name, age and occupation of the person killed or injured, and also the nature and character of the accident and of the injury caused thereby.

Section 2. The owner, operator or superintendent of a mine or colliery, shall, without delay, give notice to the inspector of the district in which said mine or colliery is situated in any or all of the following cases:

First. Where any working is commenced for the purpose of opening a new slope or mine to which this act applies.

Second. Where any mine is abandoned or the workings thereof discontinued.

Third. Where the working of any mine is recommenced after any abandonment or discontinuance for a period exceeding three months.

Fourth. Where any new coal breaker is completed and work commenced therein for the purpose of preparing coal for market.

Fifth. Where the pillars of a mine are to be removed or robbed.

Sixth. Where a squeeze or crush or any other cause or change may seem to affect the safety of persons employed in any mine, or where fire occurs or a dangerous body of gas is found in any mine.

Section 3. On or before the first day of February in each year, the owner, operator or superintendent of every mine or colliery, shall send to the inspector of the district, a correct report specifying with respect to the year ending December thirty-first, previously, the name of the operator and officials of the mine, with his postoffice address; the quantity of coal mined, the amount of powder or other explosives consumed; the number of persons employed above and below ground in or about such colliery, classifying the persons so employed. The report shall be in such form as may be from time to time prescribed by the inspectors of the district. Blank forms for said reports shall be furnished by the Commonwealth.

ARTICLE XV.

Injunctions.

Section 1. Upon application of the inspector of mines of the proper district, acting in behalf of the Commonwealth, any of the courts of law or equity having jurisdiction where the mine or colliery proceeded against is situated, whether any proceedings have or have not been taken, shall prohibit, by injunction or otherwise, the working of any mine or colliery in which any person is employed or is permitted to be for the purpose of working in contravention of the provisions of this act, and may award such costs in the matter of the injunctions or other proceedings as the court may think just; but this section shall be without prejudice to any other remedy permitted by law for enforcing the provisions of this act. Written notice of the intention to apply for such injunction in respect to any mine or colliery, shall be made to the owner, operator or superintendent of such mine or colliery not less than twenty-four (24) hours before the application is made.

ARTICLE XVI.

Arbitration.

Section 1. Whenever an inspector finds any mine or colliery or part thereof, or any matter, thing or practice connected with such mine, which in any respect thereof is not covered by or provided against by any provisions of this act or by any rule, to be dangerous or defective, or in his judgment tends to bodily injury to a person, he shall give notice thereof in writing to the owner, operator or superintendent of such mine or colliery, stating in such notice the particular matter or defect requiring remedy and may demand that the same be remedied; but the owner, operator or superintendent of said mine or colliery shall have the right to refer the demand of the inspector to a board of arbitration, and the matter shall then be arbitrated within forty-eight (48) hours of the time such complaint or demand be made. And the party against whom the award is given shall pay

all cost attending the case. The said board of arbitration shall be composed of three (3) persons, one of whom shall be chosen by the inspector, one by the said owner, operator or superintendent and a third by the two thus selected, and the decision of a majority of such board shall be final and binding in the matter.

ARTICLE XVII.

Penalties.

Section 1. Any judge of the court of quarter sessions of the peace of the county in which the mine or colliery, at which the offense, act or omission as hereinafter stated has occurred, is situated, is hereby authorized and required, upon the presentation to him of the affidavit of any citizen of the Commonwealth setting forth that the owner, operator or superintendent, or any other person employed in or about such mine or colliery had been negligently guilty of an offense against the provisions of this act, whereby a dangerous accident had resulted or might have resulted to any person or persons employed in such mine or colliery, to issue a warrant to the sheriff of said county directing him to cause such person or persons to be arrested and brought before said judge, who shall hear and determine the guilt or innocence of the person or persons so charged; and if convicted he or they shall be sentenced to pay a fine not exceeding five hundred dollars, in all cases not otherwise provided for in this act, or an imprisonment in the county jail for a period not exceeding three (3) months, or both, at the discretion of the court: Provided, That any defendant may waive trial before a judge as herein provided and at any time, at or before the time of such trial, demand a trial by a jury in the court of quarter sessions, in which case he may enter into a recognizance before said judge with such surety or sureties and in such sum as said judge may approve, conditioned for his appearance at the next court of quarter sessions to answer the charge against him and abide the orders of the court in the premises, meanwhile to be of good behavior and keep the peace, or in default of such recognizance to be committed to the county jail to await such trial.

Section 2. If any person shall feel himself aggrieved by such conviction and sentence before a judge as aforesaid, he may appeal therefrom subject to the following conditions, namely: The appellant shall, within seven days after the decree has been made, give notice to the prosecutor of his intention to appeal, and within the same time enter into a recognizance, with such surety or sureties and in such sum as shall be approved by said judge, conditioned to appear and try such appeal before the next court of quarter sessions of the peace and to abide the judgment of the court thereon and to pay

all such costs and penalties as may be there awarded, and upon the compliance with such conditions the judge shall release the appellant from custody pending the appeal.

Section 3. Nothing in this act shall prevent any person from being indicted or liable under any other act, to any higher penalty or punishment than is herein provided, and if the court before whom any such proceeding is had shall be of the opinion that proceedings ought to be taken against such persons under any other act, or otherwise, he may adjourn the case to enable such proceedings to be taken.

Section 4. All offenses under this act are declared to be misdemeanors and in default of payment of any penalty or cost by the party or parties sentenced to pay the same, he or they may be imprisoned for a period not exceeding three (3) months and not less than thirty (30) days.

Section 5. For any violation of duty by the mine inspector prescribed by this act, he shall be deemed guilty of a misdemeanor, and upon conviction, be sentenced to pay a fine of not more than three hundred dollars or be imprisoned for a period not exceeding three months, or either, or both, at the discretion of the court.

Section 6. All fines imposed under this act shall be paid into the county treasury for the use of the county.

Section 7. No conviction or acquittal under this act, in any complaint, shall be received in evidence upon the trial of any action for damages arising from the negligence of any owner, operator or superintendent or employe in any mine or colliery.

Section 8. That for any injury to person or property occasioned by any violation of this act or any failure to comply with its provisions by any owner, operator, superintendent, mine foreman or fire boss of any coal mine or colliery, a right of action shall accrue to the party injured against said owner or operator for any direct damages he may have sustained thereby; and in case of loss of life by reason of such neglect or failure aforesaid, a right of action shall accrue to the widow and lineal heirs of the person whose life shall be lost, for like recovery of damages for the injury they shall have sustained.

ARTICLE XVIII.

Definition of Terms.

In this act, unless the context otherwise requires, the term "coal mine or colliery" includes every operation and work, both under ground and above ground, used or to be used for the purpose of mining and preparing coal.

The term "workings" includes all the excavated parts of a mine, those abandoned as well as the places actually at work.

The term "mine" includes all underground workings and excavations and shafts, tunnels and other ways and openings; also all such

shafts, slopes, tunnels and other openings in course of being sunk or driven, together with all roads, appliances, machinery and materials connected with the same below the surface.

The term "shaft" means a vertical opening through the strata and which is or may be used for the purpose of ventilation or drainage or for hoisting men or material in connection with the mining of coal.

The term "slope" means any inclined way or opening used for the same purpose as a shaft.

The term "breaker" means the structure containing the machinery used for the preparation of coal.

The term "owners" and "operators" means any person or body corporate who is the immediate proprietor or lessee or occupier of any coal mine or colliery or any part thereof. The term "owner" does not include a person or body corporate who merely receives a royalty, rent or fine from a coal mine or colliery or part thereof, or is merely the proprietor of the mine subject to any lease, grant or license for the working or operating thereof, or is merely the owner of the soil and not interested in the minerals of the mine or any part thereof. But any "contractor" for the working of a mine or colliery or any part or district thereof, shall be subject to this act as an operator or owner, in like manner as if he were the owner.

The term "superintendent" means the person who shall have, on behalf of the owner, general supervision of one or more mines or collieries.

ARTICLE XIX.

All laws or parts of laws inconsistent or in conflict with the provisions of this act are hereby repealed.

Approved—The 2d day of June, A. D. 1891.

ROBT. E. PATTISON.

AN ACT

Equalizing and fixing the compensation and mileage of the members of the several boards appointed under the provisions of the act approved June second, one thousand eight hundred and ninety-one, to examine candidates for appointment as Inspectors, foremen and fire bosses, respectively, in the anthracite coal mines, and providing for the employment and compensation and mileage of a clerk to each of said boards.

Section 1. Be it enacted, &c., That from and after the passage of this act the members of the several boards appointed under the provisions of the act approved June second, one thousand eight hundred and ninety-one, to examine candidates for appointment respectively as inspectors and foremen of anthracite coal mines, shall re-

ceive in lieu of all compensation, mileage, expenses, emoluments or allowances heretofore paid them, as follows: Six dollars per day for each day during which the said members shall be actually in attendance on the sessions of the board, and mileage at the rate of five cents for each mile actually traveled going from the home of the member to the place of meeting of the board and returning from said place to his said home by the shortest practicable railway route: Provided, That mileage shall be paid but once for each continuous session of the board, and by a continuous session shall be meant a session during the course of which no adjournment for a longer period than forty-eight hours shall take place.

Section 2. Each of the boards enumerated or described in the first section of this act shall be and the same is hereby authorized to employ a clerk, whose compensation and mileage shall be the same as that of a member of the board. So much of section four of the act of June second, one thousand eight hundred and ninety-one, as authorizes the boards of examiners of candidates for inspectors of anthracite coal mines to engage the services of a clerk is hereby repealed, and all clerks hereafter appointed by the several boards hereinbefore mentioned shall be appointed under the provisions of this act.

Section 3. The members of the said boards shall, on the final adjournment of each session of their respective boards, submit to the Auditor General sworn statements approved by the president or chairman of their respective boards, setting forth the number of days during which each member shall have been actually in attendance on the sessions of the board of which he is a member during said session, as well as the distance from the home of the member to the place of meeting of his board as aforesaid, by the nearest practicable railway route, and the number of miles actually traveled by him; and the clerks of said boards shall submit like statements, and the Auditor General shall, upon the receipt of such sworn statements draw his warrant upon the State Treasurer in favor of each of such members and clerks for such sums as shall appear to be properly due each.

Section 4. All acts and parts of acts or supplements thereto in conflict herewith are hereby repealed.

Approved—The 26th day of June, A. D. 1895.

DANIEL H. HASTINGS.

AN ACT

To protect the lives and limbs of miners from the dangers resulting from incompetent miners working in the anthracite coal mines of this Commonwealth, and to provide for the examination of persons seeking employment as miners in the anthracite region, and to prevent the employment of incompetent persons as miners in anthracite coal mines, and providing penalties for a violation of the same.

Section 1. Be it enacted, &c., That hereafter no person whomsoever shall be employed or engaged in the anthracite coal region of this Commonwealth, as a miner in any anthracite coal mine, without having obtained a certificate of competency and qualification so to do from the "Miners' Examining Board" of the proper district, and having been duly registered as herein provided.

Section 2. That there shall be established in each of the eight inspection districts in the anthracite coal region, a board to be styled the "Miners' Examining Board" of thedistrict, to consist of nine miners who shall be appointed in the same manner as the boards to examine mine inspectors are now appointed from among the most skillful miners actually engaged in said business in their respective districts, and who must have had five years' practical experience in the same. The said persons so appointed shall each serve for a term of two years from the date on which their appointment takes effect, and they shall be appointed upon or before the expiration of the term of the present members of the "Miners' Examining Board," and they shall be and constitute the "Miners' Examining Board" for their respective districts, and shall hold the office for the term for which they were appointed, or until their successors are duly appointed and qualified, and shall receive as compensation for their services three dollars per day for each day actually engaged in this service, and all legitimate and necessary expenses incurred in attending the meetings of said board under the provisions of this act, and no part of the salary of said board or expenses thereof shall be paid out of the State Treasury.

Each of said boards shall organize by electing one of their members president, and one member as secretary, and by dividing themselves in to three sub-committees for the more convenient discharge of their duties, each of said committees shall have all powers hereinafter conferred upon the board; and whenever in this act the words "Examining Board" are used, they shall be taken to include any of the committees thereof.

Every member of said board shall, within ten days of their appointment or being apprised of the same, take and subscribe an oath or affirmation before a properly qualified officer of the county in which they reside, that they will faithfully and impartially discharge the duties of their office.

Any vacancies occurring in said board shall be filled in the manner

hereinbefore provided from among such only as are eligible for original appointment.

Section 3. Each of said examining boards shall designate some convenient place within their districts for the meeting of the several committees thereof, and of which due notice shall be given by advertisement in two or more newspapers of the proper county, and so divided as to reach as nearly as practicable all the mining districts therein; but in no case shall such meeting be held in a building where any intoxicating liquors are sold.

Each of said committees shall open at the designated place of meeting a book of registration, in which shall be registered the name and address of each and every person duly qualified under this act to be employed as a miner in an anthracite coal mine. And it shall be the duty of all persons employed as miners to be properly registered, and in case of a removal from the district in which a miner is registered, it shall be his duty to be registered in the district to which he removes.

Application for registration only may be sent by mail to the board after being properly attested before any person authorized to administer an oath or affirmation in the county in which the applicant resides. The form of application shall be subject to such regulation as may be prescribed by the boards, but in no case shall any applicant be put to any unnecessary expense in order to secure registration.

Section 4. Each applicant for examination and registration and for the certificate hereinafter provided, shall pay a fee of one dollar to the said board, and a fee of twenty-five cents shall be charged for registering any person who shall have been examined and registered by any other board, and the amount derived from this source shall be held by said boards and applied to the expenses and salaries herein provided and such as may arise under the provisions of this act; and the said boards shall report annually, to the court of common pleas of their respective counties and the Bureau of Mines and Mining all moneys received and disbursed under the provisions of this act, together with the number of miners examined and registered under this act and the number who failed to pass the required examination.

Section 5. That it shall be the duty of each of the said boards to meet once every month and not oftener, and said meeting shall be public, and if necessary, the meeting shall be continued to cover whatever portion may be required of a period of three days in succession, and examine under oath all persons who shall desire to be employed as miners in their respective districts; and said board shall grant such persons as may be qualified, certificates of competency or qualification which shall entitle the holder thereof to be employed

as and to do the work of miners as may be expressed in said certificate, and such certificates shall be good and sufficient evidence of registration and competency under this act; and the holder thereof shall be entitled to be registered without an examination in any other of the anthracite districts upon the payment of the fee herein provided.

All persons applying for a certificate of competency, or to entitle them to be employed as miners, must produce satisfactory evidence of having had not less than two years practical experience as a miner, or as a mine laborer in the mines of this Commonwealth, and in no case shall an applicant be deemed competent unless he appear in person before the said board and answer intelligently and correctly at least twelve questions in the English language pertaining to the requirements of a practical miner, and be perfectly identified under oath, as a mine laborer by at least one practical miner holding miners' certificates. The said board shall keep an accurate record of the proceedings of all its meetings, and in said record shall show a correct detailed account of the examination of each applicant, with the questions asked and their answer, and at each of its meetings the board shall keep said record open for public inspection. Any miner's certificate granted under the provisions of this act, and the hereinafter mentioned act approved the ninth day of May, Anno Domini one thousand eight hundred and eighty-nine, shall not be transferable to any person or persons whatsoever, and any transfer of the same shall be deemed a violation of this act. Certificates shall be issued only at meetings of said board, and said certificates shall not be legal unless then and there signed in person by at least three members of said board.

Section 6. That no person shall hereafter engage as a miner in any anthracite coal mine without having obtained such certificate as aforesaid. And no person shall employ any person as a miner who does not hold such certificate as aforesaid, and no mine foreman or superintendent shall permit or suffer any person to be employed under him, or in the mines under his charge and supervision as a miner, who does not hold such certificates. Any person or persons who shall violate or fail to comply with the provisions of this act, shall be guilty of a misdemeanor, and on conviction thereof shall be sentenced to pay a fine not less than one hundred dollars and not to exceed five hundred dollars, or shall undergo imprisonment for a term not less than thirty days and not to exceed six months, or either, or both, at the discretion of the court.

Section 7. The persons who are now serving as members of the Miners' Examining Board as created by the act approved the ninth day of May, Anno Domini one thousand eight hundred and eighty-

nine, entitled "An act to provide for the examination of miners in the anthracite region of this Commonwealth, and to prevent the employment of incompetent persons as miners in anthracite coal mines," shall continue under the provisions of this act to serve as members of the "Miners' Examining Board" until the terms for which they were appointed under the provisions of the said act approved the ninth day of May, Anno Domini one thousand eight hundred and eighty-nine, shall have expired, and in the performance of the duties of their office they shall be subject to the provisions and requirements of this act.

Section 8. Nothing in this act shall be construed to in any way, excepting as herein provided, affect miners' certificates which have been lawfully issued under the provisions of the herein mentioned act, approved the ninth day of May, Anno Domini one thousand eight hundred and eighty-nine.

Section 9. It shall be the duty of the several Miners' Examining Boards to investigate all complaints or charges of non compliance or violation of the provisions of this act, and to prosecute all persons so offending; and upon their failure so to do, then it shall become the duty of the district attorney of the county wherein the complaints or charges are made to investigate the same and prosecute all persons so offending, and it shall at all times be the duty of the district attorney to prosecute such members of the Miners' Examining Board as have failed to perform their duty under the provisions of this act; but nothing herein contained shall prevent any citizen, a resident of this Commonwealth, from prosecuting any person or persons violating this act, with power to employ private counsel to assist in the prosecution of the same; upon conviction of any member of the Miners' Examining Board for any violation of this act, in addition to the penalties herein provided, his office shall be declared vacant, and he shall be deemed ineligible to act as a member of the said board.

Section 10. For the purposes of this act the members of the said "Miners' Board" shall have power to administer oaths.

Section 11. All acts or parts of acts inconsistent herewith are hereby repealed.

Approved—The 15th day of July, A. D. 1897.

DANIEL H. HASTINGS.

AN ACT

To amend the tenth section of article ten of an act, entitled "An act to provide for the health and safety of persons employed in and about the anthracite coal mines of Pennsylvania, and for the protection and preservation of property connected therewith," approved the second day of June, Anno Domini one thousand eight hundred and ninety-one, providing that self-acting doors are used.

Section 1. Be it enacted, &c., That the tenth section of article ten

of an act, entitled "An act to provide for the health and safety of persons employed in and about the anthracite coal mines of Pennsylvania, and for the protection and preservation of property connected therewith," approved the second day of June, Anno Domini one thousand eight hundred and ninety-one, which reads as follows:

"All main doors shall have an attendant whose constant duty it shall be to open them for transportation and travel and prevent them from standing open longer than is necessary for persons or cars to pass through," be and the same is hereby amended to read as follows:

All main doors shall have an attendant, whose constant duty it shall be to open them for transportation and travel and prevent them from standing open longer than is necessary for persons or cars to pass through, unless a self-acting door is used which is approved by the inspector of the district.

Approved—The 20th day of April, A. D. 1899.

WILLIAM A. STONE.

AN ACT.

Relating to anthracite mines, and providing for the care and life and attention of employes injured in and about said mines.

Section 1. Be it enacted, &c., That within six (6) months after the passage of this act, it shall be unlawful to operate any anthracite mine, employing ten (10) men or more, in the State of Pennsylvania, unless said mine is provided with a sufficient quantity of linseed or olive oil bandages, linen, splints, woolen and waterproof blankets. Said articles shall be stored in a room, erected at a convenient place in the mine, which room shall not be less than eight by twelve feet, and sufficiently furnished, lighted, clean and ventilated so that therein medical treatment may be given injured employes in case of emergency. The furnishings shall be sufficient to accommodate two or more persons, in a reclining and sitting posture.

Section 2. It shall be the duty of the mine foreman or his assistants, in case of injury to any employe by explosion of gas or powder, or by any cause while said miners are at work in said mines, to at once visit the scene of accident, see that the injured is carefully wrapped in woolen blankets and removed to the "medical room," and so treated with oils or other remedies as will add to the comfort and care of the patient. After being treated with all the skill known to the foreman or his assistants, the injured person shall be carefully wrapped up and sent to the surface, to be taken home in an ambulance or to

the mining hospital, as may be desired, without expense to the injured party.

Section 3. Where accident to any employe involves injury to limbs or causes loss of blood, the foreman or his assistants shall see that the bandages, splints and linen shall be applied where necessary to prevent loss of blood and relieve pain. The foreman shall, in all cases, see that the injured person is sent to the surface without delay. He shall also keep a book showing required articles on hand, name of persons injured, nature of injury, treatment, and by whom treated at time of accident.

Section 4. It shall be the duty of the mine inspector to visit each of the medical rooms in his district at least once in six months; see that the law is complied with; examine records of the medical room. He shall notify the county coroner of any neglect or non-compliance with the provisions of this act by any operator, which information shall be regarded as evidence on any inquest that may be held on employes, dying from injuries received while working in such anthracite mine.

Section 5. The neglect or refusal to perform the duties required to be performed by any section of this act; by the parties therein required to perform them, or the violation of any of the requirements hereof, shall be deemed a misdemeanor, and shall, upon conviction thereof in the court of quarter sessions of the county wherein the misdemeanor was committed, be punishable by a fine not exceeding five hundred dollars, or imprisoned in the county jail for a period not exceeding six months, or both, at the discretion of the court.

Section 6. That for any injury to employes, occasioned by any violation of the act, or any failure to comply with its provisions, by any owners, operators or superintendent of any coal mine or colliery, a right of action shall accrue to the party injured against said owner or operator, for any direct injuries he may have sustained thereby; and in case of loss of life, limb or bodily power, by reason of such neglect or failure aforesaid, a right of action shall accrue to the person, widow or lineal heirs, for the recovery of damages for the injury he or they shall have sustained.

Section 7. The term "coal mine," as herein used, includes the shafts, slopes, drifts or inclined planes, connected with the excavations penetrating coal stratum or strata, which excavations are ventilated by one general air current, or division thereof, and connected by one general system of mine railroads, over which coal may be delivered to one or more parts outside the mine. The term "mine foreman" means the person who shall have, on behalf of the operators, immediate supervision of a coal mine. The term "operator" means any firm, corporation or individual operating any coal mine.

The term "anthracite mine" shall include any coal mine not now included in the bituminous boundaries.

Section 8. That all acts or parts of acts inconsistent herewith be, and the same are hereby repealed, and all local laws inconsistent herewith are hereby repealed.

Approved—The 29th day of May, A. D. 1901.

WILLIAM A. STONE.

AN ACT

Amending article two of an act, entitled "An act to provide for the health and safety of persons employed in and about the anthracite coal mines of Pennsylvania and for the protection and preservation of property connected therewith," approved the second day of June, Anno Domini one thousand eight hundred and ninety-one.

Section 1. Be it enacted, &c., That article two of an act, entitled "An act to provide for the health and safety of persons employed in and about the anthracite coal mines of Pennsylvania, and for the protection and preservation of property connected therewith," approved the second day of June, Anno Domini one thousand eight hundred and ninety-one, and which reads as follows, to-wit:

ARTICLE II.

Inspectors and Inspection Districts.

"Section 1. The counties of Susquehanna, Wayne, Luzerne, Lackawanna, Carbon, Schuylkill, Northumberland, Columbia, Lebanon and Dauphin, or so much of them as may be included under the provisions of this act, shall be divided into eight (8) inspection districts, as follows:

"Section 2. First, All that portion of the Lackawanna coal field lying northeast of East and West Market streets in the city of Scranton, and of Slocum and Drinker streets in the borough of Dunmore, including the coal fields of Susquehanna and Wayne counties.

"Second. That portion of the Lackawanna coal field in Lackawanna county lying southwest of East and West Market streets in the city of Scranton, and west of Slocum and Drinker streets in the borough of Dunmore.

"Third. That portion of the Wyoming coal field situated in Luzerne county, east of and including Plains and Kingston townships.

"Fourth. The remaining portion of the Wyoming coal field west of Plains and Kingston townships, including the city of Wilkes-Barre and the boroughs of Kingston and Edwardsville.

"Fifth. That part of Luzerne county lying south of the Wyoming coal field together with Carbon county.

"Sixth. That part of the Schuylkill coal field in Schuylkill county

lying north of the Broad Mountain and east of a meridian line through the center of the borough of Girardville.

"Seventh. That part of the Schuylkill coal field in Schuylkill county lying north of the Broad Mountain and west of a meridian line through the center of the borough of Girardville, together with Columbia, Northumberland and Dauphin counties.

"Eighth. All that part of the Schuylkill coal field in Schuylkill county lying south of the Mahanoy Valley, and the county of Lebanon.

"Section 3. In order to fill any vacancy that may occur in the office of Inspector of Mines by reason of expiration of term, resignation, removal for cause, or from any other reason whatever, the judges of the court of Lackawanna county shall appoint an examining board for the counties of Susquehanna, Wayne and Lackawanna, and the judges of the court of Luzerne county shall appoint an examining board for the counties of Sullivan, Carbon and Luzerne, and the judges of Schuylkill county shall appoint an examining board for the counties of Schuylkill, Northumberland, Lebanon, Columbia and Dauphin.

Section 4. The said Board of Examiners shall be composed of three reputable coal miners in actual practice and two reputable mining engineers, all of whom shall be appointed at the first term of court in each year, to hold their places during the year. Any vacancies that may occur in the Board of Examiners shall be filled by the court as they occur. The said Board of Examiners shall be permitted to engage the services of a clerk, and they, together with the clerk, shall each receive the sum of five dollars per day for every day they are actually engaged in the discharge of their duties under this appointment, and mileage at the rate of six cents per mile from their home to the place of meeting and return by the nearest practicable railway route.

"Section 5. Whenever candidates for the office of Inspector are to be examined, the said examiner shall give public notice of the fact in not more than five papers published in the inspection district, and at least two weeks before the meeting, specifying the time and place where such meeting shall be held. The said examiners shall be sworn to a faithful discharge of their duties, and four of them shall agree in their recommendation of all candidates to the Governor who have answered ninety per centum of the questions; the names of the applicants, the questions asked and answers thereto shall be sent to the Secretary of the Commonwealth, and published in at least two local papers, daily or weekly, and shall recommend only such applicants as they find qualified for the office.

"Should the Board of Examiners not be able to agree in their

selection and recommendation of a candidate, the judges of the court of common pleas shall dissolve the said board, and appoint a new board of like qualifications and powers.

"Upon the recommendation of the Board of Examiners as aforesaid, the Governor shall appoint such person or persons to fill the office of inspector of mines under this act, and shall issue to him a commission for the term of five years, subject, however, to removal for neglect of duty or malfeasance in office, as hereinafter provided for.

"Section 6. The person so appointed must be a citizen of Pennsylvania and shall have attained the age of thirty years. He must have a knowledge of the different systems of working coal mines, and he must produce satisfactory evidence to the Board of Examiners of having had at least five (5) years practical experience in anthracite coal mines of Pennsylvania. He must have had experience in coal mines where noxious and explosive gases are evolved.

"Before entering upon the duties of his office he shall take an oath or affirmation before an officer properly qualified to administer the same, that he will perform his duties with fidelity and impartiality; which oath or affirmation shall be filed in the office of the prothonotary of the county. He shall also provide himself with the most modern instruments and appliances for carrying out the intentions of this act.

"Section 7. The salary of each of the said inspectors shall be three thousand dollars per annum, which salary, together with the expenses incurred in carrying into effect the provisions of this act, shall be paid by the State Treasurer out of the Treasury of the Commonwealth upon the warrant of the Auditor General.

"Section 8. In case the inspector becomes incapacitated to perform the duties of his office for a longer period than two weeks, it shall be the duty of the judges of the court of common pleas to depute some competent person recommended by the board of examiners to fill the office of inspector, until the said inspector shall be able to fulfil the duties of his office; and the person so appointed shall be paid in the same manner as is provided for the inspector of mines.

"Section 9. Each of the said inspectors shall reside in the district for which he is appointed, and shall give his whole time and attention to the duties of the office. He shall examine all the collieries in his district as often as his duties will permit or as often as the exigencies of the case or the condition of the mines require it; see that every necessary precaution is taken to secure the safety of the workmen and that the provisions of this act are observed and obeyed; attend every inquest held by the coroner, or his deputy, upon the bodies of persons killed in or about the collieries in his district; visit the scene of the accident for the purpose of making an examination into the

particulars of the same whenever loss of life or serious personal injury occurs, as elsewhere herein provided for, and make an annual report of his proceedings to the Secretary of Internal Affairs of the Commonwealth at the close of every year, enumerating all the accidents in and about the collieries of his district, marking in tabular form those accidents causing death or serious personal injury, the condition of the workings of the said mines with regard to the safety of the workmen therein, and the ventilation thereof, and the result of his labors generally shall be fully set forth.

"Section 10. The Board of Examiners, each for its respective district as hereinbefore provided for, in order to divide more equitably among the several mine inspectors the labor to be performed of the duties of the office, may, at any time, when they shall deem it desirable or necessary, readjust the several districts by the creation of new boundary lines, thereby adding to or taking from, as the case may be, the districts as at present bounded and described, if the court having jurisdiction approve the same.

"And in case it shall be deemed desirable or necessary to readjust any contiguous district, comprised by more than one judicial district, by the creation of new boundary lines, then in such case the examining boards of the territory affected or requiring such adjustment shall, in joint session, make such change or readjustment as they shall jointly agree upon, if the nearest court having jurisdiction to the territory affected to whom the said joint examining boards shall submit the matter, shall approve the same.

"Section 11. The mine inspector shall have the right and it is hereby made his duty, to enter, inspect and examine any mine or colliery in his district and the workings and machinery belonging thereto, at all reasonable times, either by day or night, but not so as to impede or obstruct the working of the colliery, and shall have power to take one or more of his fellow inspectors into or around any mine or colliery in the district for which he is appointed, for the purpose of consultation or examination.

"He shall also have the right, and it is hereby made his duty, to make inquiry into the condition of such mine or colliery workings, machinery, ventilation, drainage, method of lighting or using lights and into all matters and things connected with or relating to, as well as to make suggestions providing for the health and safety of persons employed in or about the same, and especially to make inquiry whether the provisions of this act have been complied with.

"The owner, operator or superintendent of such mine or colliery is hereby required to furnish the means necessary for such entry, inspection, examination, inquiry and exit.

"The inspector shall make record of the visits, noting the time and material circumstances of the inspection.

"Section 12. No person who shall act or practice as a land agent or as a manager or agent of any coal mine or colliery, who is pecuniarily interested in operating any coal mine or colliery in his district, shall, at the same time, hold the office of Inspector of Mines under this act.

"Section 13. Whenever a petition signed by fifteen or more reputable coal operators or miners, or both, setting forth any inspector of mines neglects his duties, or is incompetent, or is guilty of malfeasance in office, it shall be the duty of the court of common pleas of the Commonwealth to the said inspector to appear at not less than five days notice, on a day fixed, before said court and the court shall then proceed to inquire into and investigate the allegations of the petitioners. If the court find that the said inspector is neglectful of his duties or that he is incompetent to perform the duties of the office for any cause that existed previous to his appointment or that has arisen since his appointment or that he is guilty of malfeasance in office, the court shall certify the same to the Governor of the Commonwealth, who shall declare the office of inspector for the district vacant and proceed, in compliance with the provisions of this act, to appoint a properly qualified person to fill the office.

"The cost of said investigation shall be borne by the removed inspector; but if the allegations in the petition are not sustained the costs shall be paid by the petitioners.

"Section 14. The maps and plans of the mines and the records thereof, together with all the papers relating thereto, shall be kept by the inspector, properly arranged and preserved, in a convenient place in the district for which each inspector has been appointed, and shall be transferred by him, with any other property of the Commonwealth that may be in his possession, to his successor in office.

"Section 15. The persons who, at the time this act goes into effect, are acting as inspectors of mines under the acts hereby repealed shall continue to act in the same manner as if they had been appointed under this act, until the term for which they were appointed has expired," be amended so as to read as follows:

ARTICLE II.

Inspectors and Inspection Districts.

Section 1. The counties of Luzerne, Lackawanna, Carbon, Schuylkill, Northumberland and Columbia, shall be divided into six inspection districts, as follows:

Section 2. First district—The county of Luzerne.

Second district—The county of Lackawanna.

Third district—The county of Carbon.

Fourth district—The county of Schuylkill.

Fifth district—The county of Northumberland.

Sixth district—The county of Columbia.

Section 3. In order to fill any vacancy that may occur in the office of Inspector of Mines by reason of the expiration of term, resignation, removal for cause or from any other reason whatever, the judges of the court of Lackawanna county shall appoint an examining board for the county of Lackawanna, and the judges of the court of Luzerne county shall appoint an examining board for the counties of Carbon and Luzerne, and the judges of Schuylkill county shall appoint an examining board for the counties of Schuylkill, Northumberland and Columbia.

Section 4. The said Board of Examiners shall be composed of three reputable coal miners in actual practice and two reputable mining engineers, all of whom shall be appointed at the first term of court in each year, to hold their places during the year. Any vacancies that may occur in the Board of Examiners shall be filled by the court as they occur. The said Board of Examiners shall be permitted to engage the services of a clerk, and they, together with the clerk shall each receive the sum of five (5) dollars per day for every day they are actually engaged in the discharge of their duties under this appointment, and mileage at the rate of six cents per mile from their home to the place of meeting and return, by the nearest practicable railway route.

Section 5. Whenever candidates for the office of Inspector are to be examined, the said examiner shall give public notice of the fact in not more than five newspapers published in the inspection district, and at least two weeks before the meeting, specifying the time and place where such meeting shall be held. The said examiners shall be sworn to a faithful discharge of their duties, and at least four of them shall sign a certificate, setting forth the fact of the applicants having passed a successful examination, and who have answered ninety per centum of the questions; the names of the applicants, the questions asked and answers thereto, shall be sent to the Secretary of the Commonwealth, and published in at least two papers, daily or weekly, and shall give such certificate to only such applicant as has passed the required examination.

Section 6. The said Board of Examiners shall hold at least one such examination during each year, at least six months before the date of the general election, in the month of November of each year.

Section 7. At the next general election in November, the qualified voters of the first inspection district shall elect five qualified persons to act as Mine Inspectors of this Commonwealth; the qualified voters of the second inspection district shall elect four qualified persons to

act as Mine Inspectors of this Commonwealth; the qualified voters of the third inspection district shall elect one qualified person to act as Mine Inspector of this Commonwealth; the qualified voters of the fourth inspection district shall elect four qualified persons to act as Mine Inspectors of this Commonwealth; the qualified voters of the Fifth Inspection district shall elect one qualified person to act as Mine Inspector of this Commonwealth: Provided, That the present Mine Inspectors in the several inspection districts shall continue in office until the expiration of the terms for which they have been appointed, and the number of inspectors to be elected at the coming election shall be reduced by the number of Inspectors now regularly appointed and serving in said districts. When the terms of the present Inspectors shall expire, their successors shall be elected in accordance with the provisions of this act. At the said first election under this act in November, Anno Domini one thousand nine hundred and two, for said Inspectors, the qualified electors of the First Inspection District shall elect two Inspectors; the qualified electors of the Second Inspection district shall elect two Inspectors; the qualified electors of the Fourth Inspection district shall elect two Inspectors; the qualified electors of the Fifth Inspection district shall elect one Inspector, and the qualified electors of the Sixth Inspection district shall elect one Inspector. At the expiration of the term of office of any of the present Inspectors, who hold office under the appointment of the Governor of the Commonwealth, the qualified electors of the Third Inspection district shall elect one Inspector, and as further vacancies are caused by the expiration of the term of office of the present Inspectors, the qualified electors of the several inspection districts shall elect Inspectors to take their places, beginning with the First Inspection district, then the Second Inspection district, Third Inspection district, Fourth Inspection district, Fifth Inspection district and Sixth Inspection district, until each inspection district has its full quota of elected inspectors under this act. Said Inspectors, elected under this act, shall be under the directions of the Chief of the Bureau of Mines, who shall assign districts to the several Inspectors in the respective counties in which they are elected.

Section 8. Candidates for the office of Mine Inspector shall file with the county commissioners a certificate from the mine examining board, as above set forth, before their names shall be allowed to go upon the ballot as provided by the county commissioners for the general election; and the name of no person shall be placed upon the official ballot except such as has filed the certificate as herein required; and no person shall be qualified to act as such Mine Inspector unless such certificate has been previously filed with the county commissioners of his county.

Section 9. The person so elected must be a citizen of Pennsylvania

and shall have attained the age of thirty years. He must have a knowledge of the different systems of work in coal mines, and he must produce satisfactory evidence to the Board of Examiners of having had at least five years practical experience in anthracite coal mines of Pennsylvania. He must have had experience in coal mines where noxious and explosive gases are evolved.

Before entering upon the duties of his office he shall take an oath or affirmation, before an officer properly qualified to administer the same, that he will perform his duties with fidelity and impartiality; which oath or affirmation shall be filed in the office of the prothonotary of the county. He shall provide himself with the most modern instruments and appliances for carrying out the intentions of this act.

Section 10. The salary of each of the said Inspectors shall be three thousand dollars per annum, which salary, together with the expenses incurred in carrying into effect the provisions of this act, shall be paid by the State Treasurer out of the Treasury of the Commonwealth upon the warrant of the Auditor General.

Section 11. Each of the said Inspectors shall hold said office for a term of three years from the first Monday of January immediately succeeding his election to said office, and until his successor is duly elected and qualified.

Section 12. It shall be the duty of the Chief of Bureau of Mines and Mining to direct one or more of the Inspectors who shall be elected under this act, and it shall be the duty of said Inspectors to obey said orders of the said Chief of Bureau of Mines and Mining, to inspect such collieries as come under the act to which this act is an amendment in counties not mentioned in this amendment to said act, in such manner and at such times as is required by law, and the inspectors inspecting said collieries shall make and include in their return a due report of said inspection.

Section 13. In case of death, resignation, removal from office, or other vacancies in the office of Mine Inspector before the expiration of said term of office, the judges of the court of common pleas of the county in which said vacancy occurs shall appoint a duly qualified person to fill said vacancy for the unexpired term. Said appointee to be one of the persons having filed with the county commissioners of said county a certificate from the Board of Examiners, showing he passed a successful examination before the said Board, and is duly qualified as hereinbefore mentioned.

Section 14. In case the Inspector becomes incapacitated to perform the duties of his office for a longer period than two weeks, it shall be the duty of the judges of the court of common pleas of the county from which said Inspector was elected to deputize some competent person, recommended by the Board of Examiners, to fill the

office of Inspector until the said Inspector shall be able to fulfil the duties of his office, and the person so appointed shall be paid in the same manner as is provided for the Inspector of Mines.

Section 15. Each of the said Inspectors shall reside in the district for which he is elected, and shall give his whole time and attention to the duties of his office. He shall examine all the collieries in his district at least once every two months, as often in addition thereto as the necessities of the case or the condition of the mines require. He shall see that every necessary precaution is taken to secure the safety of the workmen and that the provisions of this act are observed and obeyed; and he shall personally visit each working face, and see that the air-current is carried to the working faces and is of sufficient quantity or volume to thoroughly ventilate the places. He shall every three months make a report of the condition of each working face in each colliery, on a form to be furnished to the inspectors by the Chief of the Bureau of Mines and Mining, designating the gangway in which the working is situated, and the breast number of said working and their condition shall be designated by the words good, fair, or bad, as the circumstances may warrant; and the said report, or a duplicate, shall be placed in a weather and dust-proof case, with a glass front; said case to be furnished by the operator, and placed in a conspicuous place at each mine opening, shaft, slope or drift, so that the workmen have easy access thereto. He shall certify in said report that the employes are hoisted to the surface of the ground or given access thereto according to law; he shall attend every inquest held by the coroner or his deputy upon the bodies of persons killed in or about the collieries in his district; he shall visit the scene of the accident, for the purpose of making an examination into the particulars of the same, wherever loss of life or serious personal injury occurs, as elsewhere herein provided for, and make an annual report of his proceedings to the Secretary of Internal Affairs of the Commonwealth at the close of every year, enumerating all the accidents in and about the collieries in his district, marking in tabular form those accidents causing death or serious personal injury, the condition of the workings of the said mines with regard to the safety of the workmen therein and the ventilation thereof, and the results generally shall be fully set forth; and such other duties as now are or hereafter may be required by law.

Section 16. The nomination and election of said mine inspectors shall be under the general election laws of this Commonwealth.

Section 17. The Mine Inspector shall have the right, and it is hereby made his duty, to enter, inspect and examine any mine or colliery in the territory allotted to him and the workings and machinery belonging thereto, at all reasonable times, either by day or by night, but not so as to obstruct or impede the working of the colliery, and

shall have power to take one or more of his fellow inspectors into or around any mine or colliery in the territory allotted to him, for the purpose of consultation or examination.

He shall also have the right, and it is hereby made his duty, to make inquiry into the condition of such mine or colliery workings, machinery, ventilation, drainage, method of lighting or using lights, and into all matters and things connected with or relating to, as well as to make suggestions providing for, the health and safety of persons employed in or about the same, and especially to make inquiry whether the provisions of this act have been complied with.

The owner, operator or superintendent of such mine or colliery is hereby required to furnish the means necessary for such entry, inspection, examination, inquiry and exit.

The inspector shall make a record of the visit, noting the time and material circumstances of the inspection.

Section 18. No person who shall act or practice as a land agent or as a manager or agent of any coal mine or colliery, who is pecuniarily interested in operating any coal mine or colliery, shall at the same time hold the office of Inspector of Mines under this act.

Section 19. Whenever a petition signed by fifty or more reputable coal miners, or by fifteen or more reputable coal operators, or more, or both, setting forth that any inspector of mines neglects his duties, or is incompetent, or is guilty of malfeasance in office, it shall be the duty of the court of common pleas from which said Inspector was elected to issue a citation, in the name of the Commonwealth, to the said Inspector to appear at not less than five days' notice, on a day fixed, before said court, and the court shall then proceed to inquire into and investigate the allegations of the petitioners. If the court finds that the said Inspector is neglectful of his duties, or is incompetent to perform the duties of his office for any cause that existed previous to his election, or that has arisen since his election, or that he is guilty of malfeasance in office, the court shall declare the said Inspector removed from office and proceed to fill the vacancy. The cost of said investigation shall be borne by the removed Inspector; but if the allegations in the petition are not sustained, the cost shall be paid by the Treasurer of this Commonwealth upon warrant of the Auditor General, or by the petitioners in case the court finds that there was no probable ground for said charge.

Section 20. The maps and plans of the mines and the records thereof, together with all the papers relating thereto, shall be kept by the Inspector, properly arranged and preserved, in a convenient place in the territory to which the inspector has been allotted, and shall be transferred by him, with any other property of the Commonwealth that may be in his possession, to his successor in office.

Section 21. This act shall go into effect from the first day of January, Anno Domini one thousand nine hundred and two.

Section 22. All acts or parts of acts inconsistent with the provisions of this act are hereby repealed.

Approved—The 8th day of June, A. D. 1901.

WILLIAM A. STONE.

Bituminous Mining Laws

LAWS RELATING TO COAL MINING

AN ACT

To protect miners in the bituminous coal region of the Commonwealth.

Section 1. Be it enacted, &c., That after the period of three months from the passage of this act, any miner employed by an individual, firm or corporation for the purpose of mining coal shall be entitled to receive from his employer, and failing to receive then to collect, by due process of law, at such rates as may have been agreed upon between the employer and the employed, full and exact wages accruing to him for the mining of all sizes of merchantable coal so mined by him, whether the same shall exist in the form of nut or lump coal; and in the adjudication of such wages seventy-six pounds shall be deemed one bushel, and two thousand pounds net, shall be deemed one ton of coal: Provided, That nothing contained in this act shall be construed to prevent operators and miners contracting for any method of measuring and screening the coal mined by such miners, as they may contract for.

Section 2. That at every bituminous coal mine in this Commonwealth, where coal is mined by measurement, all cars, filled by miners or their laborers, shall be uniform in capacity at each mine; no unbranded car or cars shall enter the mine for a longer period than three months, without being branded by the mine inspector of the district, wherein the mine is situated; and any owner or owners, or their agents, violating the provisions of this section, shall be subject to a fine of not less than one dollar per car for each and every day as long as the car is not in conformity with this act, and the mine inspector of the district, where the mine is located, on receiving notice from the check-master or any five miners working in the mine, that a car or cars are not properly branded, or not uniform in capacity according to law, are used in the mine where he or they are employed, then inside of three days from the date of receiving said notice, it shall be his duty to enforce the provisions of this section, under penalty of ten dollars for each and every day he permits such car or cars to enter the mine: Provided, That nothing contained in this section shall be construed or applied to those mines which do not use more than ten cars.

Section 3. That at every bituminous coal mine in this Commonwealth, where coal is mined by weight or measure, the miners or a majority of those present at a meeting called for that purpose, shall have the right to employ a competent person as check-weighman, or check-measurer as the case may require, who shall be permitted at all times to be present at the weighing or measurement of coal, also have power to weigh or measure the same, and during the regular working hours to have the privilege to balance and examine the scales, or measure the cars: Provided, That all such balancing or examination of scales shall only be done in such way, and in such time, as in no way to interfere with the regular working of the mines. And he shall not be considered a trespasser during working hours while attending to the interests of his employers. And in no manner shall he be interfered with or intimidated by any person, agent, owner or miner. And any person violating these provisions shall be held and deemed guilty of a misdemeanor, and upon conviction thereof, he shall be punished by a fine of not less than twenty dollars, and not exceeding one hundred dollars, or imprisonment at the discretion of the court. It shall be a further duty of check-weighman or check-measurer to credit each miner with all merchantable coal mined by him, on a proper sheet or book to be kept by him for that purpose. When differences arise between the check-weighman or check-measurer and the agent or owners of the mine, as to the uniformity, capacity or correctness of scales or cars used, the same shall be referred to the mine inspector of the district where the mine is located, whose duty it shall be to regulate the same at once, and in the event of said scales or cars proving to be correct, then the party or parties applying for the testing thereof to bear all costs and expenses thereof; but if not correct then the owner or owners of said mine to pay the cost and charges of making said examination: Provided further, That should any weighman or weighmen, agent or check-measurer, whether employed by operators or miners, knowingly or willfully adopt or take more or less pounds for a bushel or ton than is provided for in the first section of this act, or willfully neglect the balancing or examining of the scales or cars, or knowingly and willfully weigh coal with an incorrect scale, he shall be guilty of a misdemeanor, and upon conviction thereof, shall be imprisoned in the county jail for three months.

Section 4. All acts or parts of acts inconsistent with this act are hereby repealed.

Approved—The 1st day of June, A. D. 1883.

ROBT. E. PATTISON.

AN ACT

Relating to bituminous coal mines and providing for the lives, health, safety and welfare of persons employed therein.

ARTICLE I.

Survey—Maps and Plans.

Section 1. Be it enacted, &c., That the operator or superintendent of every bituminous coal mine shall make, or cause to be made by a competent mining engineer or surveyor, an accurate map or plan of such coal mine, not smaller than on a scale of two hundred feet to an inch, which map shall show as follows:

First. All measurements of said mine in feet or decimal parts thereof.

Second. All the openings, excavations, shafts, tunnels, slopes, planes, main-entries, cross-entries, rooms, et cetera, in proper numerical order in each opened strata of coal in said mine.

Third. By darts or arrows made thereon by a pen or pencil the direction of air currents in said mine.

Fourth. An accurate delineation of the boundary lines between said coal mine and all adjoining mines or coal lands, whether owned or operated by the same operator or other operator, and the relation and proximity of the workings of said mine to every other adjoining mine or coal lands.

Fifth. The elevation above mean tide at Sandy Hook of all tunnels, and entries, and of the face of working places adjacent to boundary lines at points not exceeding three hundred feet apart.

Sixth. The bearings and lengths of each tunnel or entry, and of the boundary or property lines. The said map or plan, or a true copy thereof, shall be kept in the general mine office by the said operator or superintendent for use of the mine inspectors and for the inspection of any person or persons working in said mine whenever said person or persons shall have cause to fear that any working place is becoming dangerous by reason of its proximity to other workings that may contain water or dangerous gas.

Section 2. At least once in every six months, or oftener if necessary, the operator or superintendent of each mine shall cause to be shown accurately on the map or plan of said coal mine, all the excavations made therein during the time elapsing since such excavations were last shown upon said map or plan; and all parts of said mine which were worked out or abandoned during said elapsed period of time shall be clearly indicated by colorings on said map or plan, and whenever any of the workings or excavations of said coal mine have been driven to their destination, a correct measurement of all such workings or excavations shall be made promptly and recorded in a survey book prior to the removal of the pillars or any part of the same from such workings or excavations.

Section 3. The operator or superintendent of every coal mine shall, within six months after the passage of this act, furnish the mine inspector of the district in which said mine is located with a correct copy on tracing muslin or sun print, of the map or plan of said mine hereinbefore provided for. And the inspector of the district shall, at the end of each year or twice a year if he requires it, forward said map or plan to the proper person at any particular mine, whose duty it shall be to place or cause to be placed on said map or plan all extensions and worked out or abandoned parts of the mine during the preceding six or twelve months, as the case may be, and return the same to the mine inspector within thirty days from the time of receiving it. The copies of the maps or plans of the several coal mines of each district as hereinbefore required to be furnished to the mine inspector shall remain in the care of the inspector of the district in which the said mines are situated, as official records, to be transferred by him to his successor in office; but it is provided that in no case shall any copy of the same be made without the consent of the operator or his agent.

Section 4. If any superintendent or operator of mines shall neglect or fail to furnish to the mine inspector any copies of maps or plans as hereinbefore required by this act, or if the mine inspector shall believe that any map or plan of any coal mine made or furnished in pursuance of the provisions of this act is materially inaccurate or imperfect, then, in either case, the mine inspector is hereby authorized to cause a correct survey and map or plan of said coal mine to be made at the expense of the operator thereof, the cost of which shall be recoverable from said operator as other debts are recoverable by law: Provided, however, That if the map or plan which may be claimed by the mine inspector to be inaccurate shall prove to be correct, then the Commonwealth shall be liable for the expense incurred by the mine inspector in causing to be made said test survey and map, and the cost thereof, ascertained by the Auditor General by proper vouchers and satisfactory proof, shall be paid by the State Treasurer upon warrants which the said Auditor General is hereby directed to draw for the same.

ARTICLE II.

Section 1. It shall not be lawful for the operator, superintendent or mine foreman of any bituminous coal mine to employ more than twenty persons within said coal mine, or permit more than twenty persons to be employed therein at any one time unless they are in communication with at least two available openings to the surface from each seam or stratum of coal worked in such mine, exclusive of the furnace upcast shaft or slope: But provided, That in any mine operated by shaft or slope and ventilated by a fan, if the air shaft

shall be divided into two compartments, one of them may be used for an air-way and the other for the purpose of egress and ingress from and into said mine by the persons therein employed and the same shall be considered a compliance with the provisions of this section hereinbefore set forth. And there shall be cut out or around the side of every hoisting shaft, or driven through the solid strata at the bottom thereof, a traveling way not less than five feet high and three feet wide to enable persons to pass the shaft in going from one side of it to the other without passing over or under the cage or other hoisting apparatus.

Section 2. The shaft or outlet, other than the main shaft or outlet shall be separated from the main outlet and from the furnace shaft by natural strata at all points by a distance of not less than one hundred and fifty feet (except in all mines opened prior to June thirtieth, one thousand eight hundred and eighty-five, where such distances may be less, if in the judgment of the mine inspector one hundred and fifty feet is impracticable). If the mine be worked by drift, two openings exclusive of the furnace upcast shaft and not less than thirty feet apart, shall be required (except in drift mines opened prior to June thirtieth, one thousand eight hundred and eighty-five, where the mine inspector of the district shall deem the same impracticable). Where the two openings shall not have been provided as required hereinbefore by this act, the mine inspector shall cause the second to be made without delay; and in no case shall furnace ventilation be used where there is only one opening into the mine.

Section 3. Unless the mine inspector shall deem it impracticable, all mines shall have at least two entries or other passage ways, one of which shall lead from the main entrance and the other from the opening into the body of the mine, and said two passageways shall be kept well drained and in a safe condition for persons to travel therein, throughout their whole length so as to obtain, in cases of emergency, a second way for egress from the workings. No part of said workings shall at any time be driven more than three hundred feet in advance of the aforesaid passageways, except entries, air-ways or other narrow work, but should an opening to the surface be provided from the interior of the mine, the passageways aforesaid may be made and maintained therefrom into the working part of the mine, and this shall be deemed sufficient compliance with the provisions of this act relative thereto; said two passageways shall be separated by pillars of coal or other strata of sufficient strength and width.

Section 4. Where necessary to secure access to the two passage ways required in section three of article two of this act in any slope mine where the coal seam inclines and has workings on both sides of said slope, there shall be provided an overcast for the use of per-

sons working therein, the dimensions of which shall not be less than four feet wide and five feet high. Said overcast shall connect the workings on both sides of said slope and the intervening strata between the slope and the overcast shall be of sufficient strength and thickness at all points for its purpose: Provided, That if said overcast be substantially constructed of masonry or other incombustible material it shall be deemed sufficient.

Section 5. When the opening or outlet, other than the main opening, is made and does not exceed seventy-five feet in vertical depth, it shall be set apart exclusively for the purpose of ingress to or egress from the mine by any person or persons employed therein it shall be kept in a safe and available condition and free from steam and dangerous gases, and all other obstructions, and if such opening is a shaft it shall be fitted with safe and convenient stairs with steps of an average tread of ten inches and nine inches rise, not less than two feet wide and to not exceed an angle of sixty degrees descent with landings of not less than eighteen inches wide and four feet long, at easy and convenient distances: Provided, That the requirements of this section shall not be applicable to stairways in use prior to June thirtieth, one thousand eight hundred and eighty-five, when in the judgment of the mine inspector, they are sufficiently safe and convenient. And water coming from the surface or out of the strata in the shaft shall be conducted away by rings, casing or otherwise and be prevented from falling upon persons who are ascending or descending the stairway of the shaft.

Section 6. Where any mine is operated by a shaft which exceeds seventy-five feet in vertical depth, the persons employed in said mine shall be lowered into and raised from said mine by means of machinery, and in any such mine the shaft, other than the main shaft, shall be supplied with safe and suitable machinery for hoisting and lowering persons, or with safe and convenient stairs for use in cases of emergency by persons employed in said mine: Provided, That any mine operated by two shafts, and where safe and suitable machinery is provided at both shafts for hoisting coal or persons, shall have sufficiently complied with the requirements of this section.

Section 7. At any mine, where one of the two openings required hereinbefore is a slope and is used as a traveling way, it shall not have a greater angle of descent than twenty degrees and may be of any depth.

Section 8. The machinery used for lowering or raising the employes into or out of the mine and the stairs used for ingress or egress, shall be kept in a safe condition, and inspected once each twenty-four hours by a competent person employed for that purpose. And such machinery and the method of its inspection shall be approved by the mine inspector of the district in which the mine is situated.

ARTICLE III.

Hoisting Machinery, Safety Catches, Signaling Apparatus, Et Cetera.

Section 1. The operator or superintendent shall provide and maintain, from the top to bottom of every shaft where persons are raised or lowered, a metal tube suitably adapted to the free passage of sound through which conversation may be held between persons at the top and bottom of said shaft, and also a means of signaling from the top to the bottom thereof, and shall provide every cage or gear carriage used for hoisting or lowering persons with a sufficient overhead covering to protect those persons when using the same, and shall provide also for each said cage or carriage a safety catch approved by the mine inspector. And the said operator or superintendent shall see that flanges, with a clearance of not less than four inches, when the whole of the rope is wound on the drum, are attached to the sides of the drum of every machine that is used for lowering and hoisting persons in and out of the mine, and also that adequate brakes are attached to the drum. At all shafts safety gates, to be approved by the mine inspector of the district shall be so placed as to prevent persons from falling into the shaft.

Section 2. The main coupling chain attached to the socket of the wire rope shall be made of the best quality of iron and shall be tested by weights or otherwise to the satisfaction of the mine inspector of the district where the mine is located, and bridle chains shall be attached to the main hoisting rope above the socket, from the top cross-piece of the carriage or cage, so that no single chain shall be used for lowering or hoisting persons into or out of the mines.

Section 3. No greater number of persons shall be lowered or hoisted at any one time than may be permitted by the mine inspector of the district, and notice of the number so allowed to be lowered or hoisted at any one time shall be kept posted up by the operator or superintendent in conspicuous places at the top and bottom of the shaft, and the aforesaid notice shall be signed by the mine inspector of the district.

Section 4. All machinery about mines from which any accident would be liable to occur shall be properly fenced off by suitable guard railing.

ARTICLE IV.

Section 1. The operator or superintendent of every bituminous coal mine, whether shaft, slope or drift, shall provide and hereafter maintain ample means of ventilation for the circulation of air through the main-entries, cross-entries and all other working places to an extent that will dilute, carry off and render harmless the noxious or dangerous gases, generated in the mine, affording not less than one

hundred cubic feet per minute for each and every person employed therein; but in a mine where fire damp has been detected the minimum shall be one hundred and fifty cubic feet per minute for each person employed therein, and as much more in either case as one or more of the mine inspectors may deem requisite.

Section 2. After May thirtieth, one thousand eight hundred and ninety-four, not more than sixty-five persons shall be permitted to work in the same air current: Provided, That a larger number, not exceeding one hundred, may be allowed by the mine inspector where, in his judgment, it is impracticable to comply with the foregoing requirement; and mines where more than ten persons are employed, shall be provided with a fan, furnace or other artificial means to produce the ventilation, and all stoppings between main intake and return air-ways hereinafter built or replaced shall be substantially built with suitable material, which shall be approved by the inspector of the district.

Section 3. All ventilating fans shall be kept in operation continuously night and day, unless operations are indefinitely suspended, except written permission is given by the mine inspector of the district to stop the same, and the said written permission shall state the particular hours the said fan may not be in operation, and the mine inspector shall have power to withdraw or modify such permission as he may deem best, but in all cases the fan shall be started two hours before the time to begin work. When the fan may be stopped by permission of the mine inspector a notice printed in the various languages used by persons employed in the mine, stating at what hour or hours the fan will be stopped, shall be posted by the mine foreman in a conspicuous place at the entrance or entrances to the mine.

Said printed notices shall be furnished by the mine inspector and the cost thereof borne by the State: Provided, That should it at any time become necessary to stop the fan on account of accident or needed repairs to any part of the machinery connected therewith, or by reason of any other unavoidable cause, it shall then be the duty of the mine foreman or any other officials in charge, after first having provided, as far as possible for the safety of the persons employed in the mine, to order said fan to be stopped so as to make the necessary repairs or to remove any other difficulty that may have been the cause of its stoppage. And all ventilating furnaces in mines shall, for two hours before the appointed time to begin work and during working hours, be properly attended by a person employed for that purpose. In mines generating fire damp in sufficient quantities to be detected by ordinary safety lamps, all main air bridges or overcasts made after the passage of this act shall be built of masonry or other incombustible material of ample strength or be driven through the solid strata.

In all mines the doors used in guiding and directing the ventilation of the mine shall be so hung and adjusted that they will close themselves, or be supplied with spring or pulleys so that they cannot be left standing open, and an attendant shall be employed at all principal doors through which cars are hauled, for the purpose of opening and closing said doors when trips of cars are passing to and from the workings, unless an improved self-acting door is used, which principal doors shall be determined by the mine inspector or mine foreman. A hole for shelter shall be provided at each door so as to protect said attendant from being run over by the cars while attending to his duties, and persons employed for this purpose shall at all times remain at their post of duty during working hours: Provided, That the same person may attend two doors where the distance between them is not more than one hundred feet. On every inclined plane or road in any mine where haulage is done by machinery and where a door is used, an extra door shall be provided to be used in case of necessity.

ARTICLE V.

Safety Lamps, Fire Bosses, Et Cetera.

Section 1. All mines generating fire-damp shall be kept free of standing gas in all working places and roadways. No accumulation of explosive gas shall be allowed to exist in the worked out or abandoned parts of any mine when it is practicable to remove it, and the entrance or entrances to said worked out and abandoned places shall be properly fenced off, and cautionary notices shall be posted upon said fencing to warn persons of danger.

Section 2. In all mines wherein explosive gas has been generated within the period of six months next preceding the passage of this act, and also in all mines where fire-damp shall be generated, after the passage of this act, in sufficient quantities to be detected by the ordinary safety lamp, every working place without exception and all road ways shall be carefully examined immediately before each shift by competent person or persons appointed by the superintendent and mine foreman for that purpose. The person or persons making such examination shall have received a fire boss certificate of competency required by this act, and shall use no light other than that enclosed in a safety lamp while making said examination. In all cases said examination shall be begun within three hours prior to the appointed time of each shift commencing to work, and it shall be the duty of the said fire boss at each examination to leave at the face and side of every place so examined, evidence of his presence. And he shall also, at each examination, inspect the entrance or entrances to the worked out or abandoned parts which are adjacent

to the roadways and working places of the mine where fire-damp is likely to accumulate, and where danger is found to exist he shall place a danger signal at the entrances to such places, which shall be sufficient warning for persons not to enter said place.

Section 3. In any place that is being driven towards or in dangerous proximity to an abandoned mine or part of a mine suspected of containing inflammable gases, or which may be inundated with water, bore holes shall be kept not less than twelve feet in advance of the face, and on the sides of such working places, said side holes to be drilled diagonally not more than eight feet apart, and any place driven to tap water or gas shall not be more than ten feet wide, and no water or gas from an abandoned mine or part of a mine and no bore holes from the surface, shall be tapped until the employes, except those engaged at such work, are out of the mine, and such work to be done under the immediate instruction of the mine foreman.

Section 4. The fire boss shall at each entrance to the mine or in the main intake air-way near to the mine entrance, prepare a permanent station with the proper danger signal designated by suitable letters and colors placed thereon, and it shall not be lawful for any person or persons, except the mine officials in cases of necessity, and such other persons as may be designated by them, to pass beyond said danger station until the mine has been examined by the fire boss as aforesaid and the same, or certain parts thereof, reported by him to be safe, and in all mines where operations are temporarily suspended the superintendent and mine foreman shall see that a danger signal be placed at the mine entrance or entrances, which shall be a sufficient warning to persons not to enter the mine, and if the ordinary circulation of air through the mine be stopped each entrance to said mine shall be securely fenced off and a danger signal shall be displayed upon said fence and any workman or other person, (except those persons hereinbefore provided for,) passing by any danger signal into the mine before it has been examined and reported to be safe as aforesaid, shall be deemed guilty of a misdemeanor and it shall be the duty of the fire boss, mine foreman, superintendent or any employe to forthwith notify the mine inspector, who shall enter proceedings against such person or persons as provided for in section two of article twenty-one of this act.

Section 5. All entries, tunnels, air ways, traveling ways and other working places of a mine where explosive gas is being generated in such quantities as can be detected by the ordinary safety lamp, and pillar workings and other working places in any mine where a sudden inflow of said explosive gas is likely to be encountered, (by reason of the subsidence of the overlying strata or from any other causes), shall be worked exclusively with locked safety lamps. The use of

open lights is also prohibited in all working places, roadways or other parts of the mine through which fire-damp might be carried in the air current in dangerous quantities. In all mines or parts of mines worked with locked safety lamps the use of electric wires and electric currents is positively prohibited, unless said wires and machinery and all other mechanical devices attached thereto and connected therewith are constructed and protected in such a manner as to secure freedom from the emission of sparks or flame therefrom into the atmosphere of the mine.

Section 6. After January first, one thousand eight hundred and ninety-four, the use of the common Davy safety lamp for general work on any bituminous coal mine is hereby prohibited, neither shall the Clanny lamp be so used unless its gauze is thoroughly protected by a metallic shield, but this act does not prohibit the use of the Davy and Clanny lamps by the mine officials for the purpose of examining the workings for gas.

Section 7. All safety lamps used for examining mines or for working therein shall be the property of the operator, and shall be in the care of the mine foreman, his assistant or fire boss, or other competent person, who shall clean, fill, trim, examine and deliver the same, locked, in a safe condition to the men when entering the mine before each shift, and shall receive the same from the men at the end of each shift, for which service a charge not exceeding cost of labor and material may be made by the operator. A sufficient number of safety lamps, but not less than twenty-five per centum of those in use, shall be kept at each mine where gas has at any time been generated in sufficient quantities to be detected by an ordinary safety lamp, for use in case of emergency. It shall be the duty of every person who knows his safety lamp to be injured or defective, to promptly report such fact to the party authorized herein to receive and care for said lamps, and it shall be the duty of that party to promptly report such fact to the mine foreman.

ARTICLE VI.

Mine Foreman and His Duties.

Section 1. In order to better secure the proper ventilation of the bituminous coal mines and promote the health and safety of the persons employed therein, the operator or superintendent shall employ a competent and practical inside overseer for each and every mine, to be called mine foreman; said mine foreman shall have passed an examination and obtained a certificate of competency or of service as required by this act and shall be a citizen of the United States and an experienced coal miner, and said mine foreman shall devote the whole of his time to his duties at the mine when in opera-

tion, or in case of his necessary absence, an assistant, chosen by him, and shall keep a careful watch over the ventilating apparatus, and the air ways, traveling ways, pump and pump timbers and drainage, and shall often instruct, and as far as possible, see that as the miners advance their excavations all dangerous coal, slate and rock overhead are taken down or carefully secured against falling therein, or on the traveling and hauling ways, and that sufficient props, caps and timbers of suitable size are sent into the mine when required, and all props shall be cut square at both ends, and as near as practicable to a proper length for the places where they are to be used, and such props, caps and timbers shall be delivered in the working places of the mine.

Section 2. Every workman in want of props or timbers and cap pieces shall notify the mine foreman or his assistant of the fact at least one day in advance, giving the length and number of props or timbers and cap pieces required, but in cases of emergency the timbers may be ordered immediately upon the discovery of any danger. (The place and manner of leaving the orders for the timber shall be designated and specified in the rules of the mine.) And if, from any cause, the timbers cannot be supplied when required, he shall instruct the persons to vacate all said working places until supplied with the timber needed, and shall see that all water be drained or hauled out of all working places before the miner enters and as far as practicable kept dry while the miner is at work.

Section 3. It shall be the duty of the mine foreman to see that proper cut-throughs are made in all the room pillars at such distances apart as in the judgment of the mine inspector may be deemed requisite, not more than thirty-five nor less than sixteen yards each, for the purpose of ventilation, and the ventilation shall be conducted through said cut-through into rooms by means of check doors made of canvas or other suitable material, placed on the entries, or in other suitable places, and he shall not permit any room to be opened in advance of the ventilating current. Should the mine inspector discover any room, entry, air-way or other working places being driven in advance of the air current contrary to the requirements of this section, he shall order the workmen working in such places to cease work at once until the law is complied with.

Section 4. In all hauling roads, on which hauling is done by animal power, and whereon men have to pass to and from their work, holes for shelter, which shall be kept clear of obstruction, shall be made at least every thirty yards and be kept whitewashed, but shelter holes shall not be required in entries from which rooms are driven at regular intervals not exceeding fifty feet, where there is a space four feet between the wagon and rib, it shall be deemed sufficient for shelter. On all hauling roads whereon hauling is done by ma-

chinery, and all gravity or inclined planes inside mines upon which the persons employed in the mine must travel on foot to and from their work, such shelter holes shall be cut not less than two feet six inches into the strata and not more than fifteen yards apart, unless there is a space of at least six feet from the side of the car to the side of the roadway, which space shall be deemed sufficient for shelter: Provided, That this requirement shall not apply to any parts of mines which parts were opened prior to the passage of this act if deemed impracticable by the mine inspector.

Section 5. The mine foreman shall measure the air current at least once a week at the inlet and outlet and at or near the faces of the entries, and shall keep a record of such measurements. An anemometer shall be provided for this purpose by the operator of the mine. It shall be the further duty of the mine foreman to require the workmen to use locked safety lamps when and where required by this act.

Section 6. The mine foreman shall give prompt attention to the removal of all dangers reported to him by the fire boss or any other person working in the mine, and in mines where a fire boss is not employed, the said mine foreman or his assistant shall visit and examine every working place therein at least once every alternate day while the miners of such place are or should be at work, and shall direct that each and every working place be properly secured by props or timbers, and that no person shall be directed or permitted to work in an unsafe place unless it be for the purpose of making it safe: Provided, That if the owner or operator of any mine employing a fire boss shall require the mine foreman to examine every working place every alternate day, then it shall be the duty of the mine foreman to do so.

Section 7. When the mine foreman is unable personally to carry out all the requirements of this act as pertaining to his duties, he shall employ a competent person or persons, not objectionable to the operator, to act as his assistant or assistants, who shall act under his instructions, and in all mines where fire-damp is generated the said assistant or assistants shall possess a certificate of competency as mine foreman or fire boss.

Section 8. A suitable record book, with printed head lines, prepared by and approved by the mine inspector, the same to be provided at the expense of the Commonwealth, shall be kept at each mine generating explosive gases, and immediately after each examination of the mine made by the fire boss or fire bosses, a record of the same shall be entered in said book, signed by the person or persons making such examinations, which shall clearly state the nature and location of any danger which he or they may have discovered, and the fire boss or fire bosses shall immediately report such

danger and the location of the same to the mine foreman, whose duty it shall be to remove the danger, or to cause the same to be done forthwith as far as practicable, and the mine foreman shall also each day countersign all reports entered by the fire boss or fire bosses. At all mines the mine foreman shall enter in a book provided as above by the mine inspector, a report of the condition of the mine, signed by himself, which shall clearly state any danger that may have come under his observation during the day, and shall also state whether he has a proper supply of material on hand for the safe working of the mine, and whether all requirements of the law are strictly complied with. He shall, once each week, enter or cause to be entered, plainly, with ink, in said book, a true record of all air measurements required by this act, and such books shall at all times, be kept at the mine office for examination by the mine inspector of the district and any other person working in the mines.

ARTICLE VII.

Timber and Other Mine Supplies, Et Cetera.

Section 1. It shall be the duty of the superintendent, on behalf and at the expense of the operator to keep on hand at the mines at all times, a full supply of all materials and supplies required to preserve the health and safety of the employes as ordered by the mine foreman and required by this act. He shall at least once a week, examine and countersign—(which countersignature of the superintendent shall be held, under this act to have no further bearing than the evidence of the fact that the mine superintendent has read the matter entered on the book)—all reports entered in the mine record book, and if he finds that the law is being violated in any particular, he shall order the mine foreman to comply with its provisions forthwith. If from any cause he cannot procure the necessary supplies or materials as aforesaid, he shall notify the mine foreman, whose duty it shall be to withdraw the men from the mine or part of mine until such supplies or materials are received.

Section 2. The superintendent of the mine shall not obstruct the mine foreman or other officials in their fulfillment of any of the duties required by this act. At mines where superintendents are not employed, the duties that are herein prescribed for the superintendent shall devolve upon the mine foreman.

ARTICLE VIII.

Steam Boilers, Stables, Regulations for the Use of Oil, Powder, Et Cetera.

Section 1. After the passage of this act it shall be unlawful to place a main or principal ventilating fan shed inside of any bituminous coal mine wherein explosive gas has been detected or in which the

air current is contaminated with coal dust. No stationary steam boiler shall be placed in any bituminous coal mine, unless said steam boiler be placed within fifty feet from the bottom of an up-cast shaft, which shaft shall not be less than twenty-five square feet in area, and after May thirtieth, one thousand eight hundred and ninety-five, no stationary steam boiler shall be permitted to remain in any bituminous coal mine, only as aforesaid.

Section 2. It shall not be lawful after the passage of this act to provide any horse or mule stables inside of bituminous coal mines, unless said stables are excavated in the solid strata or coal seams, and no wood or other combustible material shall be used excessively in the construction of said stables, unless surrounded by or incased by some incombustible material. The air current used for ventilating said stable shall not be intermixed with the air current used for ventilating the working parts of the mine, but shall be conveyed directly to the return air current, and no open light shall be permitted to be used in any stable in any mine.

Section 3. No hay or straw shall be taken into any mine, unless pressed and made up into compact bales, and all hay or straw taken into the mines as aforesaid, shall be stored in a storehouse excavated in the solid strata or built in masonry for that purpose. After January first, one thousand eight hundred and ninety-four, no horse or mule stable or storehouse, only as aforesaid, shall be permitted in any bituminous coal mine.

Section 4. No explosive oil shall be used or taken into bituminous coal mines for lighting purposes, and oil shall not be stored or taken into the mines in quantities exceeding five gallons. The oiling or greasing of cars inside of the mines is strictly forbidden unless the place where said oil or grease is used is thoroughly cleaned at least once every day to prevent the accumulation of waste oil or grease on the roads or in the drains at that point. Not more than one barrel of lubricating oil shall be permitted in the mine at any one time. Only a pure animal or pure cotton-seed oil or oils, that shall be as free from smoke as pure animal or pure cotton-seed oil, shall be used for illuminating purposes in any bituminous mine. Any person found knowingly using explosive or impure oil, contrary to this section, shall be prosecuted as provided for in section two of article twenty-one of this act.

Section 5. No powder or high explosive shall be stored in any mine, and no more of either article shall be taken into the mine at any one time than is required in any one shift, unless the quantity be less than five pounds, and in all working places where locked safety lamps are used blasting shall only be done by the consent and in the presence of the mine foreman, his assistant or fire boss, or any competent party designated by the mine foreman for that pur-

pose; whenever the mine inspector discovers that the air in any mine is becoming vitiated by the unnecessary blasting of the coal, he shall have the power to regulate the use of the same and to designate at what hour of the day blasting may be permitted.

ARTICLE IX.

Opening for Drainage, Et Cetera, on Other Lands.

Section 1. If any person, firm or corporation is or shall hereafter be seized in his or their own right of coal lands, or shall hold such lands under lease and shall have opened or shall desire to open a coal mine on said land, and it shall not be practicable to drain or ventilate such mines or to comply with the requirements of this act as to ways of ingress and egress or traveling ways by means of openings on lands owned or held under lease by him, them or it, and the same can be done by means of openings on adjacent lands, he, they or it may apply by petition to the court of quarter sessions of the proper county, after ten days' notice to the owner or owners, their agents or attorney, setting forth the facts under oath or affirmation particularly describing the place or places where such opening or openings can be made, and the pillars of coal or other material necessary for the support of such passageway and such right of way to any public road as may be needed in connection with such opening, and that he or they cannot agree with the owner or owners of the land as to the amount to be paid for the privilege of making such opening or openings, whereupon the said court shall appoint three disinterested and competent citizens of the county to view the ground designated and lay out from the point or points mentioned in such petition, a passage or passages not more than eighty feet area by either drift, shaft or slope, or by a combination of any of said methods by any practicable and convenient route to the coal of such person, firm or corporation, preferring in all cases an opening through the coal strata where the same is practicable. The said viewers shall at the same time, assess the damages to be paid by the petitioner or petitioners to the owner or owners of such lands for the coal and other valuable material to be removed in the excavation and construction of said passage, also for such coal or other valuable material necessary to support the said passage, as well as for a right of way not exceeding fifteen feet in width from any such opening to any public road, to enable persons to gain entrance to the mine through such opening or to provide therefrom, upon the surface, a water course of suitable dimensions to a natural stream to enable the operator to discharge the water from said mine if such right of way shall be desired by the petitioner or petitioners, which damages shall be fully paid before such opening is made. The proceedings shall be recorded in the road docket of the proper county, and the pay of viewers

shall be the same as in road cases; if exceptions be filed they shall be disposed of by the court as speedily as possible, and both parties to have the right to take depositions as in road cases. If, however, the petitioner desires to make such openings or roads or waterways before the final disposition of such exceptions, he shall have the right to do so by giving bond, to be approved by the court securing the damages as provided by law in the case of lateral railroads.

Section 2. It shall be compulsory upon the part of the mine owner or operator to exercise the powers granted by the provisions of the last preceding section for the procuring of a right of way on the surface from the opening of a coal mine to a public road or public roads, upon the request in writing of fifty miners employed in the mine or mines of such owner or operator: Provided however, That with such request satisfactory security be deposited with the mine owner or operator by said petitioners, being coal miners, to fully and sufficiently pay all costs, damages and expenses caused by such proceedings and in paying for such right of way.

Section 3. In any mine or mines, or parts thereof, wherein water may have been allowed to accumulate in large and dangerous quantities, putting in danger the adjoining or adjacent mines and the lives of the miners working therein, and when such can be tapped and set free and flow by its own gravity to any point of drainage, it shall be lawful for any operator or person having mines so endangered, with the approval of the inspector of the district, to proceed and remove the said danger by driving a drift or drifts protected by bore holes as provided by this act, and in removing said danger it shall be lawful to drive across property lines if needful.

And it shall be unlawful for any person to dam or in any way obstruct the flow of any water from said mine or parts thereof, when so set free on any part of its passage to point of drainage.

Section 4. No operator shall be permitted to mine coal within fifty feet of any abandoned mine containing a dangerous accumulation of water, until said danger has been removed by driving a passage way so as to tap and drain off said water as provided for in this act: Provided, That the thickness of the barrier pillars shall be greater and shall be in proportion of one foot of pillar thickness to each one and one-quarter foot of waterhead if, in the judgment of the engineer of the property and that of the district mine inspector, it is necessary for the safety of the persons working in the mine.

Section 5. All operators of bituminous coal mines shall keep posted in a conspicuous place at their mines the general and special rules embodied in and made part of this act, defining the duties of all persons employed in or about said mine, which said rules shall be printed in the English language, and shall also be printed in such

other language or languages as are used by any ten persons working therein. It shall be the duty of the mine inspector to furnish to the operator printed copies of such rules and such translations thereof as are required by this section, and to certify their correctness over his signature. The cost thereof shall be borne by the State.

ARTICLE X.

Inspectors, Examining Boards, Et Cetera.

Section 1. The board of examiners appointed to examine candidates for the office of mine inspectors under the provisions of the act to which this is a supplement, shall exercise all the powers granted, and perform all the duties required by this supplementary act, and at the expiration of their term of office, and every four years thereafter, the Governor shall appoint, as hereinafter provided, during the month of January, two mining engineers of good repute and three other persons, who shall have passed successful examinations qualifying them to act as mine inspectors or mine foremen in mines generating fire-damp, who shall be citizens of this Commonwealth and shall have attained the age of thirty years and shall have had at least five years of practical experience in the bituminous mines of Pennsylvania, and who shall not be serving at that time in any official capacity at mines, which five persons shall constitute a board of examiners whose duty it shall be to inquire into the character and qualification of candidates for the office of inspector of mines under the provisions of this act.

Section 2. The examining board, so constituted shall meet on the first Tuesday of March following their appointment, in the city of Pittsburgh, to examine applicants for the office of mine inspector: Provided, however, The examining board shall meet two weeks previous to the aforesaid time for the purpose of preparing questions, et cetera, and when called together by the Governor on extra occasions at such time and place as he may designate, and after being duly organized and having taken and subscribed before any officer authorized to administer the same the following oath, namely, "We, the undersigned, do solemnly swear (or affirm) that we will perform the duties of examiners of applicants for the appointment as inspectors of bituminous coal mines to the best of our abilities, and that in recommending or rejecting said applicant, we will be governed by the evidence of the qualifications to fill the position under the law creating the same, and not by any consideration of political or personal favor; and that we will certify all whom we may find qualified according to the true intent and meaning of the act and none others."

Section 3. The general examination shall be in writing and the manuscript and other papers of all applicants, together with the

tally sheets and the solution of each question as given by the examining board, shall be filed with the Secretary of Internal Affairs as public documents, but each applicant shall undergo an oral examination pertaining to explosive gases and safety lamps, and the examining board shall certify to the Governor the names of all such applicants which they shall find competent to fill this office under the provisions of this act, which names, with the certificates and their percentages and the oaths of the examiners, shall be mailed to the Secretary of the Commonwealth and be filed in his office. No person shall be certified as competent whose percentage shall be less than ninety per centum, and such certificate shall be valid only when signed by four of the members of the examining board.

Section 4. The qualification of candidates for said office of inspectors of mines to be inquired into and certified by said examiners, shall be as follows, namely: They shall be citizens of Pennsylvania, of temperate habits, of good repute as men of personal integrity, and shall have attained the age of thirty years, and shall have had at least five years of practical experience in working of or in the workings of the bituminous mines of Pennsylvania immediately preceding their examination, and shall have had practical experience with fire-damp inside the mines of this country, and upon examination shall give evidence of such theoretical as well as practical knowledge and general intelligence respecting mines and mining and the working and ventilation thereof, and all noxious mine gases, and will satisfy the examiners of their capability and fitness for the duties imposed upon inspectors of mines by the provisions of this act. And the examining board shall immediately after the examination, furnish to each person who came before it to be examined, a copy of all questions whether oral or written, which were given at the examination on printed slips of paper and to be marked solved, right, imperfect or wrong, as the case may be, together with a certificate of competency to each candidate who shall have made at least ninety per centum.

Section 5. The board of examiners may, also at their meeting, or when at any time called by the Governor together for an extra meeting, divide the bituminous coal regions of the State into inspection districts, no district to contain less than sixty nor more than eighty mines, and as nearly as possible equalizing the labor to be performed by each inspector, and at any subsequent calling of the board of examiners this division may be revised as experience may prove to be advisable.

Section 6. The board of examiners shall each receive ten dollars per day for each day actually employed, and all necessary expenses, to be paid out of the State Treasury. Upon the filing of the certificate of the examining board in the office of the Secretary of the

Commonwealth, the Governor shall, from the names so certified, commission one person to be inspector of mines for each district as fixed by the examiners in pursuance of this supplementary act, whose commission shall be for a full term of four years from the fifteenth day of May following: Always provided however, The highest candidate or candidates in percentage shall have priority to be commissioned for a full term or unexpired term before those candidates of lower percentage, and in case of a tie percentage the oldest candidate shall be commissioned.

Section 7. As often as vacancies occur in said office of inspectors of mines, the Governor shall commission for the unexpired term from the names on file, the highest percentage in the office of the Secretary of the Commonwealth, until the number shall be exhausted, and whenever this may occur, the Governor shall cause the afore-said board of examiners to meet, and they shall examine persons who may present themselves for the vacant office of mine inspector as herein provided, and the board of examiners shall certify to the Governor all persons who shall have made ninety per centum in said examination, one of whom to be commissioned by him according to the provisions of this act for the office of mine inspector for the unexpired term, and any vacancy that may occur in the examining board shall be filled by the Governor of this Commonwealth.

Section 8. Each inspector of mines shall receive for his services an annual salary of three thousand dollars and actual traveling expenses, to be paid quarterly by the State Treasurer upon warrant of the Auditor General, and each mine inspector shall keep an office in the district for which he is commissioned and he shall be permitted to keep said office at his place of residence: Provided, A suitable apartment or room be set off for that purpose. Each mine inspector is hereby authorized to procure such instruments, chemical tests and stationery and to incur such expenses of communication from time to time, as may be necessary to the proper discharge of his duties under this act at the cost of the State, which shall be paid by the State Treasurer upon accounts duly certified by him and audited by the proper department of the State.

Section 9. All instruments, plans, books, memoranda, notes and other material pertaining to the office shall be the property of the State, and shall be delivered to their successors in office. In addition to the expenses now allowed by law to the mine inspectors in enforcing the several provisions of this act, they shall be allowed all necessary expenses by them incurred in enforcing the several provisions of said law in the respective courts of the Commonwealth, the same to be paid by the State Treasurer on warrants drawn by the Auditor General after auditing the same; all such accounts presented by the mine inspector to the Auditor General shall be item-

ized and first approved by the court before which the proceedings were instituted.

Section 10. Each mine inspector of bituminous coal mines shall, before entering upon the discharge of his duties, give bond in the sum of five thousand dollars, with sureties to be approved by the president judge of the district in which he resides, conditional for the faithful discharge of his duties, and take an oath or affirmation to discharge his duties impartially and with fidelity to the best of his knowledge and ability. But no person who shall act as manager or agent of any coal mine, or as mining engineer or is interested in operating any coal mine, shall, at the same time act as mine inspector of coal mines under this act.

Section 11. Each inspector of bituminous coal mines shall devote the whole of his time to the duties of his office. It shall be his duty to examine each mine in his district as often as possible, but a longer period of time than three months shall not elapse between said examination, to see that all the provisions of this act are observed and strictly carried out, and he shall make a record of all examinations of mines, showing the condition in which he finds them, especially with reference to ventilation and drainage, the number of persons employed in each mine, the extent to which the law is obeyed and progress made in the improvement of mines, the number of serious accidents and the nature thereof, the number of deaths resulting from injuries received in or about the mines with the cause of such accident or death, which record completed to the thirty-first day of December of each and every year, shall, on or before the fifteenth day of March following, be filed in the office of the Secretary of Internal Affairs, to be by him recorded and included in the annual report of his department.

Section 12. It shall be the duty of the mine inspector on examination of any mine, to make out a written, or partly written and partly printed report of the condition in which he finds such mine and post the same in the office of the mine or other conspicuous place. The said report shall give the date of the visit, the number of cubic feet of air in circulation and where measured, and that he has measured the air at the cut through one or more rooms in each heading or entry, and such other information as he shall deem necessary, and the said report shall remain posted in the office or conspicuous place for one year and may be examined by any person employed in or about the mine.

Section 13. In case the inspector becomes incapacitated to perform the duties of his office or receives a leave of absence from the same from the Governor, it shall be the duty of the judge of the court of common pleas of his district to appoint, upon said mine inspector's application or that five miners or five operators of said inspector's

district, some competent person, recommended by the board of examiners to fill the office of inspector until the said inspector shall be able to resume the duties of his office, and the person so appointed shall be paid in the same manner as is hereinbefore provided for the inspector of mines.

ARTICLE XI.

Inspectors' Powers, Et Cetera.

Section 1. That the mine inspectors may be enabled to perform the duties herein imposed upon them, they shall have the right at all times to enter any bituminous coal mine to make examinations or obtain information, and upon the discovery of any violation of this act, they shall institute proceedings against the person or persons at fault under the provisions of section two of article twenty-one of this act. In case, however, where, in the judgment of the mine inspector of the district, any mine or part of mine is in such dangerous condition as to jeopardize life or health, he shall at once notify two of the mine inspectors of the other districts, whereupon they shall at once proceed to the mine where the danger exists and examine into the matter, and if, after full investigation thereof, they shall agree in the opinion that there is immediate danger, they shall instruct the superintendent of the mine in writing to remove such condition forthwith, and in case said superintendent shall fail to do so, then they shall apply, in the name of the Commonwealth, to the court of common pleas of the county, or in case the court shall not be in session, to a judge of the said court in chambers in which the mine may be located for an injunction to suspend all work in and about said mine, whereupon said court or judge shall at once proceed to hear, and determine speedily the same, and if the cause appear to be sufficient after hearing the parties and their evidences, as in like cases, shall issue its writ to restrain the working of said mine until all cause of danger is removed, and the cost of said proceedings shall be borne by the owner, lessee or agent of the mine: Provided, That if said court shall find the cause not sufficient, then the case shall be dismissed and the costs shall be borne by the county wherein said mine is located.

ARTICLE XII.

Inquests, Et Cetera.

Section 1. Whenever, by reason of any explosion or other accidents in any bituminous coal mine or the machinery connected therewith, loss of life or serious personal injury shall occur, it shall be the duty of the person having charge of such mine to give notice thereof

forthwith to the mine inspector of the district and also to the coroner of the county, if any person is killed.

Section 2. If the coroner shall determine to hold an inquest, he shall notify the mine inspector of the district of time and place of holding the same, who shall offer such testimony as he may deem necessary to thoroughly inform the said inquest of the cause of the death, and the said mine inspector shall have authority at any time to appear before such coroner and jury and question or cross-question any witness, and in choosing a jury for the purpose of holding such inquest it shall be the duty of the coroner to empanel a jury, no one of which shall be directly or indirectly interested.

Section 3. It shall be the duty of the mine inspector, upon being notified of any fatal accident as herein provided, to immediately repair to the scene of the accident and make such suggestions as may appear necessary to secure the safety of any persons who may be endangered, and if the results of the accident do not require an investigation by the coroner the said mine inspector shall proceed to investigate and ascertain the cause of the accident and make a record thereof, which he shall file as provided for, and to enable him to make the investigation he shall have power to compel the attendance of persons to testify, and to administer oaths or affirmations, and if it is found upon investigation that the accident is due to the violation of any provisions of this act by any person, other than those who may be deceased, the mine inspector may institute proceedings against such person or persons as provided for in section two of article twenty-one of this act.

Section 4. The cost of such investigation shall be paid by the county in which the accident occurred in the same manner as costs of inquests held by coroners or justices of the peace are paid.

ARTICLE XIII.

Neglect or Incompetence of Inspectors.

Section 1. The court of common pleas in any county or district, upon a petition signed by not less than fifteen reputable citizens, who shall be miners or operators of mines, and with the affidavit of one or more of said petitioners attached setting forth that any inspector of mines neglects his duties or is incompetent, or that he is guilty of a malfeasance in office, shall issue a citation in the name of the Commonwealth to the said mine inspector to appear on not less than fifteen days' notice, upon a day fixed, before said court, at which time the court shall proceed to inquire into and investigate the allegations of the said petitioners.

Section 2. If the court find that the said mine inspector is neglectful of his duties or incompetent to perform the duties of his office or that he is guilty of malfeasance in office, the court shall certify the

same to the Governor, who shall declare the office of said mine inspector vacant and proceed in compliance with the provisions of this act to supply the vacancy; and the costs of said investigation shall, if the charges are sustained, be imposed upon the mine inspector, but if the charges are not sustained, they shall be imposed upon the petitioners.

ARTICLE XIV.

Discretionary Powers of Inspectors, Arbitration, Et Cetera.

Section 1. The mine inspectors shall exercise a sound discretion in the enforcement of the provisions of this act, and if the operator owner, miners, superintendent, mine foreman or other persons employed in or about the mine as aforesaid shall not be satisfied with any decision the mine inspector may arrive at in the discharge of his duties under this act, which said decision shall be in writing signed by the mine inspector, the said owner, operator, superintendent, mine foreman or other person specified above shall either promptly comply therewith or within seven days from date thereof appeal from such decision to the court of quarter sessions of the county wherein the mine is located, and said court shall speedily determine the question involved in said decision and appeal and the decision of said court shall be binding and conclusive.

Section 2. The court or the judge of said court in chambers may in its discretion, appoint three practical, reputable, competent and disinterested persons whose duty it shall be, under instructions of the said court, to forthwith examine such mine or other cause of complaint and report under oath, the facts as they exist or may have been, together with their opinions thereon within thirty days after their appointment. The report of said board shall become absolute unless exceptions thereto shall be filed within ten days after the notice of the filing thereof by the owner, operator, mine superintendent, mine foreman, mine inspector and other persons, as aforesaid, and if exceptions are filed the court shall at once hear and determine the same and the decision shall be final and conclusive.

Section 3. If the court shall finally sustain the decision of the mine inspector, then the appellant shall pay all costs of such proceedings, and if the court shall not sustain the decision of the mine inspector then such costs shall be paid by the county: Provided, That no appeal from any decision made by any mine inspector which can be immediately complied with shall work as a supersedeas to such decisions during the pendency of such appeal, but all decisions shall be in force until reversed or modified by the proper court.

ARTICLE XV.

Examinations of Mine Foremen and Fire Bosses.

Section 1. On the petition of the mine inspector the court of common pleas in any county in said district shall appoint an examining board of three persons, consisting of a mine inspector, a miner and an operator or superintendent, which said miner shall have received a certificate of competency as mine foreman in mines generating explosive gases, and the members of said examining board shall be citizens of this Commonwealth, and the persons so appointed shall after being duly organized take and subscribe before an officer authorized to administer the same, the following oath, namely: "We, the undersigned, do solemnly swear (or affirm) that we will perform the duties of examiners of applicants for the position of mine foremen and fire bosses of bituminous coal mines to the best of our abilities, and that in certifying or rejecting said applicants we will be governed by the evidence of the qualifications to fill the position under the law creating the same and not by any consideration of personal favor; that we will certify all whom we may find qualified and none others."

Section 2. The examining board shall examine any person applying thereto as to his competency and qualifications to discharge the duties of mine foreman or fire boss.

Applicants for mine foreman or fire boss certificates shall be at least twenty-three years of age, and shall have had at least five years' practical experience, after fifteen years of age, as miners, superintendent at or inside of the bituminous mines of Pennsylvania and shall be citizens of this Commonwealth and men of good moral character and of known temperate habits.

The said board shall be empowered to grant certificates of competency of two grades, namely: certificates of first grade, to persons who have had experience in mines generating explosive gases and who shall have the necessary qualifications to fulfil the duties of mine foreman in such mines; and certificates of second grade, to persons who give satisfactory evidence of their ability to act as mine foreman in mines not generating explosive gases.

Section 3. The said board of examiners shall meet at the call of the mine inspector and shall grant certificates to all persons whose examination shall disclose their fitness for the duties of mine foreman as above classified, or fire boss, and such certificates shall be sufficient evidence of the holder's competency for the duties of said position so far as relates to the purposes of this act: Provided, That all persons holding certificates of competency granted under the provisions of the act to which this is a supplement shall continue to

act under this act: And provided further, That any person acting as mine foreman upon a certificate of service under the act to which this is a supplement may continue to act in the same capacity at any mine where the general conditions affecting the health and safety of the persons employed do not differ materially from those at the mine in which he was acting when said certificate was granted: Provided, however, That if such a mine foreman leaves his present employer and secures employment elsewhere at any mine where in the judgment of the mine inspector of the district the conditions affecting the health and safety of the persons employed do differ materially from those at the mine at which he was employed when his certificate was granted, it shall then be the duty of the mine inspector of the district in which he has secured employment to serve written protest against such mine foreman's employment to the operator of said mine.

Section 4. The examining board shall hold their office for a period of four years from the date of their appointment and shall receive five dollars per day for each day necessarily employed and mileage at the rate of three cents per mile for each mile necessarily traveled, and all other necessary expenses connected with the examination shall be paid by the Commonwealth. Each applicant before being examined shall pay the examining board the sum of one dollar, and one dollar additional for each certificate granted, which shall be for the use of the Commonwealth. The foregoing examination shall be held annually in each inspection district.

ARTICLE XVI.

Suspension of Certificates of Mine Foreman and Fire Bosses.

Section 1. No person shall act as fire boss in any bituminous coal mines, unless granted a certificate of competency by any one of the several examining boards. All applicants applying to any of the examining boards for fire boss certificates shall undergo an oral examination in the presence of explosive gas, and such certificate shall only be granted to men of good moral character and of known temperate habits, and it shall be unlawful for any operator or superintendent to employ any person as fire boss who has not obtained such certificate of competency as required by this act.

Section 2. If the mine foreman or fire boss shall neglect his duties or has incapacitated himself by drunkenness, or has been incapacitated by any other cause for the proper performance of said duties, and the same shall be brought to the knowledge of the operator or superintendent it shall be the duty of such operator or superintendent to discharge such delinquent at once and notify the inspector of the district of such action, whereupon it shall be the duty of

said inspector to inform the court of common pleas of the county who shall issue a citation in the name of the Commonwealth to the said operator, superintendent, mine foreman or fire boss to appear at not less than fifteen days' notice upon a day fixed before said court, at which time the court shall proceed to inquire into and investigate the allegations. If the court finds that the allegations are true, it shall notify the examining board of such finding and instruct the said board to withdraw the certificate of such delinquent during any period of time that said court may deem sufficient, and at the expiration of such time he shall be entitled to a re examination.

ARTICLE XVII.

Employment of Boys and Females.

Section 1. No boy under the age of twelve years, or any woman or girl of any age, shall be employed or permitted to be in the workings of any bituminous coal mine for the purpose of employment, or for any other purpose; and no boy under the age of sixteen shall be permitted to mine or load coal in any room, entry or other working place, unless in company with a person over sixteen years of age. If the mine inspector or mine foreman has reason to doubt the fact of any particular boy being as old as this act requires for the service which said boy is performing at any mine, it shall be the duty of said mine inspector or mine foreman to report the fact to the superintendent, giving the name of said boy, and the said superintendent shall at once discharge the said boy.

ARTICLE XVIII.

Stretchers.

Section 1. It shall be the duty of operators or superintendents to keep at the mouth of the drift, shaft, or slope, or at such other place about the mine as shall be designated by the mine inspector, a stretcher properly constructed, and a woolen and a waterproof blanket in good condition for use in carrying away any person who may be injured at the mine: Provided, That where more than two hundred persons are employed two stretchers and two woolen and two waterproof blankets shall be kept. And in mines generating fire-damp a sufficient quantity of linseed or olive oil, bandages and linen shall be kept in store at the mines for use in emergencies, and bandages shall be kept at all mines.

ARTICLE XIX.

Annual Reports.

Section 1. On or before the twenty-fifth day of January in each year the operator or superintendent of every bituminous coal mine

shall send to the mine inspector of the district in which said mine is located a correct report, specifying with respect to the year ending the thirty-first day of December preceding, the name of the operator and officers of the mine and the quantity of coal mined. The report shall be in such form and give such information regarding said mines as may be from time to time required and prescribed by the mine inspector of the district. Blank forms for such reports shall be furnished by the Commonwealth.

ARTICLE XX.

Additional Duties of Mine Foreman.

Section 1. Rule 1. The mine foreman shall attend personally to his duties in the mine and carry out all the instructions set forth in this act and see that the regulations prescribed for each class of workmen under his charge are carried out in the strictest manner possible, and see that any deviation from or infringements of any of them are promptly adjusted.

Rule 2. He shall cause all stoppings along the airways to be properly built.

Rule 3. He shall see that the entries at such places where road grades necessitate sprags or brakes to be applied or removed shall have a clear level width of not less than two and one-half feet, between the side of car and the rib to allow the driver to pass his trip safely and keep clear of the cars there.

Rule 4. He shall direct that all miners undermine the coal properly before blasting it and that blasting shall be done at only such hours as he shall direct and shall order the miners to set sprags under the coal, when necessary for safety while undermining at distances not exceeding seven feet apart, and he shall not allow the improper drawing of pillars.

Rule 5. In mines where fire damp is generated when the furnace fire has been put out it shall not be relighted, except in his presence, or that of his assistant under his instructions.

Rule 6. In case of accident to a ventilating fan or its machinery, or the fan itself, whereby the ventilation of the mine would be seriously interrupted, it shall be his duty to order the men to immediately withdraw from the mine and not allow their return to their work until the ventilation has been restored and the mine has been thoroughly examined by him or his assistant and reported to be safe.

Rule 7. He shall see that all dangerous places are properly fenced off and proper danger signal boards so hung on such fencing, that they may be plainly seen; he shall also travel all air roads and examine all the accessible openings to old workings as often as is necessary to insure their safety.

Rule 8. He shall provide a book or sheet to be put in some convenient place, or places, upon which shall be made a place for the numbers used by the miners with space sufficient to each number, so that the miners can write plainly the quantity of props, their approximate length and the number of caps and other timbers which they require, together with the date of the order. Said book or sheets shall be preserved for thirty days from their date.

Duties of Fire Boss.

Rule 9. He shall enter the mine before the men have entered it, and before proceeding to examine the same, he shall see that the air current is traveling in its proper course, and if all seems right, he shall proceed to examine the workings.

Rule 10. He shall not allow any person, except those duly authorized to enter or remain in any part of the mine through which a dangerous accumulation of gas is being passed in the ventilating current from any other part of the mine.

Rule 11. He shall frequently examine the edge and accessible parts of new falls and old gobs and air courses, and he shall report at once any violation of this act to the mine foreman.

Duties of Miners.

Rule 12. He shall examine his working place before beginning work and take down all dangerous slate, or otherwise make it safe by properly timbering the same before commencing to dig or load coal, and in mines where fire bosses are employed, he shall examine his place to see whether the fire boss has left the proper marks indicating his examination thereof, and he shall at all times be very careful to keep his working place in a safe condition during working hours.

Rule 13. Should he at any time find his place becoming dangerous either from gas or roof, or from any unusual condition which may have arisen, he shall at once cease working, and inform the mine foreman or his assistant of such danger, and before leaving such place he shall place some plain warning at the entrance thereto to warn others from entering into the danger.

Rule 14. It shall be the duty of every miner to mine his coal properly and to set sprags under the coal while undermining to secure it from falling and, after each blast, he shall exercise great care in examining the roof and coal and shall secure them safely before beginning work.

Rule 15. When places are liable to generate sudden volumes of fire damp, or where locked safety lamps are used, no miner shall be allowed to fire shots except under the supervision and with the con-

sent of the mine foreman, or his assistant, or other competent person designated by the mine foreman for that purpose.

Duties of Drivers.

Rule 16. When a driver has occasion to leave his trip he must be careful to see that it is left, when possible, in a safe place, secure from cars or other dangers, or from endangering drivers of trip following.

Rule 17. The driver must take great care while taking his trips down grades to have the brakes or sprags so adjusted that he can keep the cars under control and prevent them from running onto himself or others.

Rule 18. He shall not leave any cars standing where they may materially obstruct the ventilating current, except in case of accident to the trip.

Duties of Trip Riders or Runners.

Rule 19. He shall exercise great care in seeing that all hitchings are safe for use and see that all the trip is coupled before starting, and should he at any time see any material defect in the rope, link or chain, he shall immediately remedy such defect or, if unable to do so, he shall detain the trip and report the matter to the mine foreman.

Duties of Engineer.

Rule 20. It shall be the duty of the engineer to keep a careful watch over his engine and all machinery under his charge and see that the boilers are properly supplied with water, cleaned and inspected at proper intervals, and that the steam pressure does not exceed at any time the limit allowed by the superintendent.

Rule 21. He shall make himself acquainted with the signal codes provided for in this act.

Rule 22. He shall not allow any unauthorized person to enter the engine house, neither shall he allow any person to handle or run the engine, without the permission of the superintendent.

Rule 23. When workmen are being raised or lowered he shall take special precautions to keep the engine well under control.

Rule 24. The locomotive engineer must keep a sharp lookout ahead of his engine and sound the whistle or alarm bell frequently when coming near the partings or landings; he must not exceed the speed allowed by the mine foreman or superintendent. He must not allow any person except his attendants, to ride on the engine or on the full cars.

Duties of Firemen.

Rule 25. Every fireman and other person in charge of a boiler or boilers for the generation of steam shall keep a careful watch of the same; he shall see that the steam pressure does not at any time exceed the limit allowed by the superintendent; he shall frequently try the safety-valve and shall not increase the weight on the same; he shall maintain a proper depth of water in each boiler, and if anything should happen to prevent this, he shall report the same without delay to the superintendent, or other person designated by the superintendent, and take such other action as may, under the particular circumstances, be necessary for the protection of life and the preservation of property.

Duties of Fan Engineer.

Rule 26. The engineer in charge of any ventilating fan must keep it running at such speed as the mine foreman directs in writing. In case of accident to the boiler or fan machinery, not requiring the immediate withdrawal of the men from the mine by reason of serious interruption of the ventilation, he shall invariably notify the mine foreman. If ordinary repairs of the fan or machinery becomes necessary, he must give timely notice to the mine foreman and await his instructions before stopping it. He shall also examine at the beginning of each shift all the fan bearings, stays and other parts, and see that they are kept in proper working order. Should it become impossible to run the fan or necessary to stop it to prevent destruction, he shall then at once stop it and notify the mine foreman immediately and give immediate warning to persons in the mine.

Duties of Furnacemen.

Rule 27. The furnace man must attend to his duties with regularity, and in case he should be likely to be off work for any reason whatever, he must give timely notice to the mine foreman.

Rule 28. The furnace man must at all times keep a clear, brisk fire and the fire must not be smothered with coal or slack during working hours, nor shall he allow ashes to accumulate excessively on or under the bars, or in the approaches to the furnace, and ashes shall be cooled before being removed.

Rule 29. The furnace man must promptly obey the instructions of the mine foreman.

SHAFTS AND SLOPES.

Duties of Hookers-On.

Rule 30. The hookers-on at the bottom of any slope shall be very careful to see that the cars are properly coupled to a rope or chain

and that the safety-catch or other device is properly attached to the car before giving the signal to the engineer.

Duties of Cagers.

Rule 31. The cager at the bottom of any shaft shall not attempt to withdraw the car until the cage comes to rest, and when putting the full car on the cage he must be very careful to see that the springs or catches are properly adjusted so as to keep the car in its proper place before giving the signal to the engineer.

Rule 32. At every shaft or slope mine in which provision is made in this act for lowering and hoisting persons, a headman and footman shall be designated by the superintendent or mine foreman, who shall be at their proper places from the time that persons begin to descend until all the persons who may be at the bottom of said shaft or slope, when quitting work, shall be hoisted; such headman and footman shall personally attend to the signals and see that the provisions of this act in respect to lowering or hoisting persons in shafts or slopes shall be complied with.

Rule 33. He shall not allow any tools to be placed on the same cage with men or boys, nor on either cage when persons are being hoisted out of the mine, or being lowered into the mine, except when for the purpose of repairing the shaft or machinery therein. The men shall place their tools in cars provided for that purpose which car, or cars, shall be hoisted or lowered before and after the men have been hoisted or lowered. And he shall immediately inform the mine foreman of any violation of this rule.

Rule 34. He shall also see that no driver, or other person, ascends the shaft with any horse or mule, unless the said horse or mule is secured in a suitable box, or safely penned, and only the driver in charge of said horse or mule shall accompany it in any case.

Duties of Top Man.

Rule 35. The top man of any slope, or incline plane, shall be very careful to close the safety block, or other device, as soon as the cars have reached the landing so as to prevent any loose or runaway cars from descending the slope, or incline plane, and in no case shall such safety block, or other device, be withdrawn until the cars are coupled to the rope or chain and the proper signal given. He shall carefully inspect daily all the machinery in and about the check house, and the rope used for lowering the coal and promptly report any defect discovered to the superintendent, and shall use great care in attaching securely the wagons or cars to the rope and carefully lower the same down the incline. He shall ring the alarm bell in case of accident, and when necessary immediately set free to act, the drop logs or safety switch.

Rule 36. The top man of any shaft shall see that the springs or keeps for the cage to rest upon are kept in good working order, and when taking the full car off he must be careful that no coal or other material is allowed to fall down the shaft.

Rule 37. He shall be at his proper place from the time that persons begin to descend until all the persons who may be at the bottom of said shaft or slope when quitting work shall be hoisted. Such headman and footman shall personally attend to the signals, and see that the provisions of this act in respect to lowering and hoisting persons in shafts or slopes shall be complied with.

Rule 38. He shall not allow any tools to be placed on the same cage with men or boys, nor on either cage when persons are being lowered into the mine, except when for the purpose of repairing the shaft or the machinery therein. The men shall place their tools in cars provided for that purpose, which car or cars shall be lowered before and after the men have been lowered.

Rule 39. He shall also see that no driver, or other person, descends the shaft with any horse or mule, unless the said horse or mule is secured in a suitable box or safely penned, and only the driver in charge of said horse or mule shall accompany it in any case.

General Rules.

Rule 40. If any person shall receive any injury in or about the mine and the same shall come within the knowledge of the mine foreman, and if he shall be of the opinion that the injured person requires medical or surgical treatment, he shall see that said injured person receives the same, and in case of inability of such injured person to pay therefor the same shall be borne by the county. The mine foreman shall report monthly to the mine inspector of the district on blanks furnished by said inspector for that purpose, all accidents resulting in personal injury.

Rule 41. No unauthorized person shall enter the mine without permission from the superintendent or mine foreman.

Rule 42. No person in a state of intoxication shall be allowed to go into or loiter about the mine.

Rule 43. All employes shall inform the mine foreman or his assistant of the unsafe condition of any working place, hauling roads or traveling ways, or of damage to doors, brattices or stoppings, or of obstructions in the air passages when known to them.

Rule 44. No person shall be employed to blast coal, rock or slate, unless the mine foreman is satisfied that such a person is qualified by experience to perform the work with ordinary care.

Rule 45. The mine superintendent or mine foreman shall cause to be constructed safety blocks or some other device for the purpose of preventing cars from falling into the shaft, or running away on

slopes or incline planes; and safety switches, drop logs or other device shall be used on all slopes and incline planes; and said safety blocks, safety switches or other device must be maintained in good working order.

Rule 46. Every workman employed in the mine shall examine his working place before commencing work, and after any stoppage of work during the shift he shall repeat such examination.

Rule 47. No person shall be allowed to travel on foot to or from his work on any incline plane, dilly or locomotive roads, when other good roads are provided for that purpose.

Rule 48. Any employe or other person who shall wilfully deface, pull down or destroy any notice board, danger signal, general or special rules or mining laws, shall be prosecuted as provided for in section two, article twenty-one of this act.

Rule 49. No powder or high explosive shall be taken into the mine in greater quantities than required for use in one shift, unless such quantity be less than five pounds, and all powder shall be carried into the mine in metallic canisters.

Rule 50. Powder in quantities exceeding twenty-five pounds, or other explosives in quantities exceeding ten pounds, shall not be stored in any tippie or any weighing office, nor where workmen have business to visit, and no naked lights shall be used while weighing and giving out powder.

Rule 51. All persons except those duly authorized, are forbidden to meddle or tamper in any way with any electric or signal wires in or about the mines.

Rule 52. No greater number of persons shall be hoisted or lowered at any one time in any shaft than is permitted by the mine inspector, and whenever said number of persons shall arrive at the bottom of the shaft in which persons are regularly hoisted or lowered, they shall be furnished with an empty cage and be hoisted, and in cases of emergency a less number shall be promptly hoisted. Any person or persons crowding or pushing to get on or off the cages shall be deemed guilty of a misdemeanor.

Rule 53. Each workman, when engaged shall have his attention directed to the general and special rules by the person employing him.

Rule 54. Workmen and all other persons are expressly forbidden to commit any nuisance or throw into, deposit, or leave coals or dirt, stones or other rubbish in the air way or road so as to interfere with, pollute, or hinder the air passing into and through the mine.

Rule 55. No one, except a person duly authorized by the mine foreman, shall have in his possession a key or other instrument for the purpose of unlocking any safety lamp in any mine where locked safety lamps are used.

Rule 56. Every abandoned slope, shaft, air hole or drift shall be properly fenced around or across its entrance.

Rule 57. No safety lamps shall be entrusted to any person for use in mines until he has given satisfactory evidence to the mine foreman that he understands the proper use thereof and danger of tampering with the same.

Rule 58. No person shall ride upon or against any loaded car or cage in any shaft or slope in or about any bituminous coal mine; no person other than the trip runner shall be permitted to ride on empty trips on any slope, inclined plane or dilly road, when the speed of the cars exceeds six miles per hour. The transportation of tools in and out of the mines shall be under the direction of the mine foreman.

Rule 59. No persons other than the drivers or trip runners shall be permitted to ride on the full cars.

Rule 60. In mines where coal dust has accumulated to a dangerous extent, care shall be exercised to prevent said dust from floating in the atmosphere by sprinkling it with water, or otherwise, as far as practicable.

Rule 61. In cutting of clay veins, spars or faults in entries, or other narrow workings going into the solid coal in mines where explosive gases are generated in dangerous quantities, a bore hole shall be kept not less than three feet in advance of the face of the work, or an advance of any shot hole drilled for a blast to be fired therein.

Rule 62. The engineer placed in charge of an engine whereby persons are hoisted out of or lowered into any mine shall be a sober competent person, and not less than twenty-one years of age.

Rule 63. When a workman is about to fire a blast he shall be careful to notify all persons who might be endangered thereby, and shall give sufficient alarm so that any person or persons approaching shall be warned of the danger.

Rule 64. In every shaft or slope where persons are hoisted or lowered by machinery, as provided by this act, a topman and cager shall be appointed by the superintendent or mine foreman.

Rule 65. Whenever a workman shall open a box containing powder or other explosives, or while in any manner handling the same, he shall first place his lamp not less than five feet from such explosive and in such a position that the air current cannot convey sparks to it, and he shall not smoke while handling explosives.

Rule 66. An accumulation of gas in mines shall not be removed by brushing.

Rule 67. When gas is ignited by blast or otherwise, the person having charge of the place where the said gas is ignited, shall immediately extinguish it if possible, and if unable to do so shall immediately notify the mine foreman or his assistants of the fact. Workmen must see that no gas blowers are left burning upon leaving their working places.

Rule 68. All ventilating fans used at mines shall be provided with recording instruments by which the number of revolutions or the effective ventilating pressure of the fan shall be registered and the registration with its date for each and every day shall be kept in the office of the mine for future reference for one year from its date.

Rule 69. Where the clothing or wearing apparel of employes becomes wet by reason of working in wet places in the mines, it shall be the duty of the operator or superintendent of each mine, at the request in writing of the mine inspector, who shall make such request upon the petition of any five miners of any one mine in the district working in the aforesaid wet places, to provide a suitable building which shall be convenient to the principal entrances of such mine for the use of the persons employed in wet places therein for the purpose of washing themselves and changing their clothes when entering the mine and returning therefrom. The said building shall be maintained in good order and be properly lighted and heated and shall be provided with facilities for persons to wash. If any person or persons shall neglect or fail to comply with the provisions of this article or maliciously injure or destroy, or cause to be injured or destroyed, the said building or any part thereof, or any of the appliances or fittings used for supplying light and heat therein, or doing any act tending to the injury or destruction thereof, he or they shall be deemed guilty of an offense against this act.

Rule 70. In all shafts and slopes where persons, coal or other materials are hoisted by machinery the following code of signals shall be used:

One rap or whistle to hoist coal or other material.

One rap or whistle to stop cage or car when in motion.

Two raps or whistles to lower cage or car.

Three raps or whistles when persons are to be hoisted, and for engineer to signal back ready when persons are to be hoisted, after which persons shall get on the cage or car, then one rap shall be given to hoist.

Four raps or whistles, to turn on steam to the pumps.

But a variation from the above code of signals may be used by permission of the mine inspector: Provided, That in any such case such changed code shall be printed and posted.

Rule 71. No person or persons shall go into any old shaft or abandoned part of the mine or into any other place which is not in actual course of working without permission from the mine foreman, nor shall they travel to and from their work except by the traveling way assigned for that purpose.

Rule 72. No steam pipes through which high pressure steam is conveyed for the purpose of driving pumps or other machinery, shall be permitted on traveling or haulage ways, unless they are encased

in asbestos, or some other suitable non-conducting material, or are so placed that the radiation of heat into the atmosphere of the mine will be prevented as far as possible.

Rule 73. Where a locomotive is used for the purpose of hauling coal out of a mine, the tunnel or tunnels through which the locomotive passes shall be properly ventilated and kept free as far as practicable of noxious gases, and a ventilating apparatus shall be provided by the operator to produce such ventilation when deemed necessary and practicable to do so by the mine inspector.

Rule 74. No inexperienced person shall be employed to mine out pillars unless in company with one or more experienced miners, and by their consent.

ARTICLE XXI.

Penalties.

Section 1. Any person or persons whomsoever, who shall intentionally or carelessly injure any shaft, safety lamp, instrument, air-course or brattice, or obstruct or throw open air ways, or take matches for any purpose, or pipes or other smokers' articles beyond any station inside of which locked safety lamps are used, or injure any part of the machinery, or open a door in the mine and not close it again immediately or open any door which opening is forbidden, or disobey any order given in carrying out the provisions of this act, or do any other act whatsoever whereby the lives or the health of persons or the security of the miners or the machinery is endangered, shall be deemed guilty of a misdemeanor and may be punished in a manner provided for in this article.

Section 2. The neglect or refusal to perform the duties required to be performed by any section of this act by the parties therein required to perform them, or the violation of any of the provisions or requirements hereof, shall be deemed a misdemeanor and shall upon conviction thereof in the court of quarter sessions of the county wherein the misdemeanor was committed, be punishable by a fine not exceeding five hundred dollars or imprisonment in the county jail for a period not exceeding six months, or both, at the discretion of the court.

Section 3. That for any injury to person or property occasioned by any violation of this act, or any failure to comply with its provisions by any owner, operator or superintendent of any coal mine or colliery, a right of action shall accrue to the party injured against said owner or operator for any direct damages he may have sustained thereby, and in case of loss of life by reason of such neglect or failure aforesaid, a right of action shall accrue to the widow and lineal heirs of the person whose life shall be lost for like recovery of damages for the injury they shall have sustained.

ARTICLE XXII.

Definition.

Section 1. Coal Mine. In this act the term "coal mine" includes the shafts, slopes, adits, drifts or inclined planes connected with excavations penetrating coal stratum or strata, which excavations are ventilated by one general air current or divisions thereof and connected by one general system of mine railroads over which coal may be delivered to one or more common points outside the mine, when such is operated by one operator.

Excavations and Workings. The term "excavations and workings" includes all the excavated parts of a mine, those abandoned as well as the places actually being worked, also all underground workings and shafts, tunnels and other ways and openings, all such shafts, slopes, tunnels and other openings in the course of being sunk or driven, together with all roads, appliances, machinery and material connected with the same below the surface.

Shaft. The term "shaft" means a vertical opening through the strata, and which is or may be used for the purpose of ventilation or drainage or for hoisting men or material or both in connection with the mining of coal.

Slope. The term "slope" means an incline way or opening used for the same purpose as a shaft.

Operator. The term "operator" means any firm, corporation or individual operating any coal mine or part thereof.

Superintendent. The term "superintendent" means the person who shall have, on behalf of the operator, immediate supervision of one or more mines.

Bituminous Mines. The term "bituminous" coal mines shall include all coal mines in the State not now included in the anthracite boundaries.

The provisions of this act shall not apply to any mine employing less than ten persons in any one period of twenty-four hours.

ARTICLE XXIII.

Section 1. That all acts or parts of acts inconsistent herewith be and the same are hereby repealed.

Approved—The 15th day of May, A. D. 1893.

ROBT. E. PATTISON.

AN ACT

Requiring the weighing of bituminous coal before screening, and providing a penalty for the violation thereof.

Section 1. Be it enacted, &c., That it shall be unlawful for any

mine owner, lessee or operator of any bituminous coal mine in this Commonwealth, employing miners at bushel or ton rates, or other quantity, to pass the output of coal mined by said miners over any screen or other device which shall take any part from the weight, value or quantity thereof, before the same shall have been weighed and duly credited to the employe sending the same to the surface and accounted for at the legal rate of weight fixed by laws of this Commonwealth.

Section 2. Any owner, lessee or operator of any bituminous coal mine, violating the provisions of this act, shall be deemed guilty of a misdemeanor, and shall, upon conviction, for each and every such offense be punished by a fine of not less than one hundred (\$100) dollars nor more than five hundred (\$500) dollars, or by imprisonment in the county jail for a period not to exceed ninety days, or by both such fine and imprisonment, at the discretion of the court; proceedings to be instituted in any court of competent jurisdiction.

Section 3. All acts or parts of acts inconsistent herewith be and the same are hereby repealed.

Approved—The 15th day of July, A. D. 1897.

DANIEL H. HASTINGS.

AN ACT

To amend section four of article eight of an act, entitled "An act relating to bituminous coal mines and providing for the lives, health, safety and welfare of persons employed therein," approved the fifteenth day of May, Anno Domini one thousand eight hundred and ninety-three permitting the use of mineral oils in bituminous mines when used in approved safety lamps.

Section 1. Be it enacted, &c., That section four of article eight of an act, entitled "An act relating to bituminous coal mines and providing for the lives, health, safety and welfare of persons employed therein," approved the fifteenth day of May, Anno Domini one thousand eight hundred and ninety-three, which reads as follows:

"Section 4. No explosive oil shall be used or taken into bituminous coal mines for lighting purposes and oil shall not be stored or taken into the mines in quantities exceeding five gallons. The oiling or greasing of cars inside of the mines is strictly forbidden unless the place where said oil or grease is used is thoroughly cleaned at least once every day to prevent the accumulation of waste oil or grease on the roads or in the drains at that point. Not more than one barrel of lubricating oil shall be permitted in the mine at any one time. Only a pure animal or pure cotton-seed oil or oils that shall be as free from smoke as pure animal or pure cotton-seed oil shall be used for illuminating purposes in any bituminous mine. Any person

found knowingly using explosive or impure oil contrary to this section shall be prosecuted as provided for in section two of article twenty-one of this act," be and the same is hereby amended to read as follows:

Section 4. No explosive oil shall be used or taken into bituminous coal mines for lighting purposes except when used in approved safety lamps and oil shall not be stored or taken into the mines in quantities exceeding five gallons. The oiling or greasing of cars inside of the mines is strictly forbidden unless the place where said oil or grease is used is thoroughly cleaned at least once every day to prevent the accumulation of waste oil or grease on the roads or in the drains at that point. Not more than one barrel of lubricating oil shall be permitted in the mine at any one time. Only a pure animal oil or pure cotton-seed oil or oils that shall be as free from smoke as pure animal or pure cotton-seed oil shall be used for illuminating purposes in any bituminous mine. Any person found knowingly using explosive or impure oil contrary to this section shall be prosecuted as provided for in section two of article twenty-one of this act.

Approved—The 28th day of April, A. D. 1899.

WILLIAM A. STONE.

General Mining Laws

AN ACT

To provide payment to the miner for all clean coal mined by him.

Section 1. Be it enacted, &c., That from and after the passage of this act all individuals, firms and corporations engaged in mining coal in this Commonwealth, who, instead of dumping all the cars that come from the mine into a breaker or chutes, shall switch out one or more of the cars for the purpose of examining them, and determining the actual amount of slate or refuse, by removing said slate or refuse from the car, and who shall, after so doing, willfully neglect to allow the miner in full for all clean coal left after the refuse, dirt or slate is taken out, at the same rate paid at the mine for clean coal less the actual expense of removing said slate or refuse, he shall be deemed guilty of a misdemeanor.

Section 2. That any individual, firm or corporation as aforesaid, violating the provisions of this act, upon suit being brought and conviction had, shall be sentenced by the court to pay a fine of not more than one hundred dollars, and to make restitution by paying to the miner the amount to which, under this act, he would be entitled for the coal mined by him, and for which he was not paid.

Approved—The 13th day of June, A. D. 1883.

ROBT. E. PATTISON

AN ACT

To provide for the recovery of the bodies of workmen enclosed, buried or entombed in coal mines.

Section 1. Be it enacted, &c., That whenever any workman or workmen shall heretofore have been, or shall hereafter be enclosed, entombed or buried in any coal mine in this Commonwealth, it shall be the duty of the court, sitting in equity, in the county wherein such workman or workmen are enclosed, entombed or buried, upon the petition of any of the relatives of those enclosed, entombed or buried, to make an order of court for the petitioner to take testimony in order that the court may ascertain whether such workman or

workmen, or the body or bodies of such workman or workmen, can be recovered or taken out of said mine.

If, after full hearing, it shall appear to the court that such undertaking is feasible or practicable, said court may forthwith issue a peremptory mandamus to the owner or owners, lessee or lessees, operator or operators of such coal company, to forthwith proceed to work for and recover and take out the body or bodies of such workman or workmen, and said court shall have full authority to enforce such peremptory mandamus in the manner already provided for the enforcement of such process.

Approved—The 9th day of May, A. D. 1889.

JAMES A. BEAVER.

AN ACT

For the better protection of employes in and about the coal mines by preventing mine superintendent, mine foremen and assistants from receiving or soliciting any sums of money or other valuable consideration from men while in their employ, and providing a penalty for violation of the same.

Section 1. Be it enacted, &c., That on and after the passage of this act any mine superintendent, mine foreman or assistant foreman, or any other person or persons who shall receive or solicit any sum of money or other valuable consideration, from any of his or their employes for the purpose of continuing in his or their employ, shall be guilty of a misdemeanor, and upon conviction shall be subject to a fine not less than fifty dollars, nor more than three hundred dollars, and undergo an imprisonment of not less than six months, or both, at the discretion of the court.

Section 2. All acts or parts of acts inconsistent herewith be and the same are hereby repealed.

Approved—The 15th day of June, A. D. 1897.

DANIEL H. HASTINGS.

AN ACT

Establishing a Bureau of Mines in the Department of Internal Affairs of Pennsylvania, defining its purposes and authority, providing for the appointment of a chief of said bureau and assistants, and fixing their salaries and expenses.

Section 1. Be it enacted, &c., That there is hereby established in the Department of Internal Affairs of Pennsylvania a bureau to be known as the Bureau of Mines, which shall be charged with the

supervision of the execution of the mining laws of this Commonwealth, and the care and publication of the annual reports of the inspectors of coal mines.

Section 2. The chief officer of the bureau shall be denominated Chief of the Bureau of Mines, and shall be appointed by the Governor, by and with the advice and consent of the Senate, within thirty days after the final passage of this act, and every four years thereafter, who shall be commissioned by the Governor to serve a term of four years from the date of his appointment, and until his successor is duly qualified, and shall receive an annual salary of three thousand dollars and traveling expenses; and in case of a vacancy in the office of Chief of said Bureau, by reason of death, resignation or otherwise, the Governor shall appoint a qualified person to fill such vacancy for the unexpired balance of the term.

Section 3. The Chief of the Bureau of Mines shall be a competent person having had at least ten years practical experience in the working and ventilation of coal mines of this State, and a practical and scientific knowledge of all noxious and dangerous gases found in such mines. The said Chief of the Bureau of Mines so appointed shall, before entering upon the duties of his office, take and subscribe to the oath of office prescribed by the Constitution, the same to be filed in the office of the Secretary of the Commonwealth, and give to the Commonwealth a bond in the penal sum of ten thousand dollars, with surety to be approved by the Governor and Secretary of Internal Affairs, conditioned for the faithful discharge of the duties of his office.

Section 4. It shall be the duty of the Chief of the Bureau to devote the whole of his time to the duties of his office, and to see that the mining laws of this State are faithfully executed; and for this purpose he is hereby invested with the same power and authority as the mine inspectors to enter, inspect and examine any mine or colliery within the State, and the works and machinery connected therewith, and to give such aid and instruction to the mine inspectors from time to time as he may deem best calculated to protect the health and promote the safety of all persons employed in and about the mines, and the said Chief of the Bureau of Mines shall have the power to suspend any mine inspector for any neglect of duty, but such suspended mine inspector shall have the right to appeal to the Secretary of Internal Affairs, who shall be empowered to approve of such suspension or restore such suspended mine inspector to duty, after investigating the causes which led to such suspension. Should the Chief of the Bureau of Mines receive information by petition, signed by ten or more miners, or one or more operators, setting forth that any of the mine inspectors are neglectful of their duty, or are incompetent to perform the duties of their

office, or are guilty of malfeasance in office, he shall at once investigate the matter, and if he shall be satisfied that the charge or charges are well founded, he shall then petition the court of common pleas, or the judge in chambers, in any county within or partly within the inspection district of the said mine inspector; which court, upon receipt of said petition and a report of the character of the charges and testimony produced, shall at once issue a citation in the name of the Commonwealth to the said inspector, to appear on not less than fifteen days' notice, on a fixed day before said court, at which time the court shall proceed to inquire into the allegations of the petitioners, and may require the attendance of such witnesses on the subpoena issued and served by the proper officer or officers, as the judge of the court and the Chief of said Bureau may deem necessary in the case; the inspector under investigation shall also have similar power and authority to compel the attendance of witnesses in his behalf. If the court shall find by said investigation that the said mine inspector is guilty of neglecting his official duties, or is incompetent to perform the duties of his office, or is guilty of malfeasance in office, the said court shall certify the same to the Governor, who shall declare the office vacant, and shall proceed to supply the vacancy as provided for by the mining laws of this State. The cost of said investigation shall, if the charges are sustained, be imposed upon the mine inspector, but if the charges are not sustained the cost shall be paid out of the State Treasury, upon voucher or vouchers duly certified as to correctness by the judge or proper officer of the court where such proceedings are held. To enable the said Chief of the Bureau of Mines to conduct more effectually his examinations and investigations of the charges and complaints which may be made by petitioners against any of the mine inspectors as herein provided, he shall have power to administer oaths and take affidavits and depositions in form and manner provided by law: Provided however, That nothing in this section shall be construed as to repeal section thirteen of article two of the act of Assembly approved the second day of June, Anno Domini one thousand eight hundred and ninety-one, entitled "An act to provide for the health and safety of persons employed in and about the anthracite coal mines of Pennsylvania, and for the protection and preservation of property connected therewith," and also articles thirteen and fourteen of an act of Assembly approved the fifteenth day of May, Anno Domini one thousand eight hundred and ninety-three, entitled "An act relating to bituminous coal mines, and providing for the lives, health, safety and welfare of persons employed therein."

Section 5. It shall be the duty of the Chief of the Bureau of Mines to take charge of and preserve in his office the annual reports of the mine inspectors, and transmit a copy of them, together with

such other statistical data compiled therefrom and other matter relating to the work of the Bureau as may be of public interest, properly addressed to the Secretary of Internal Affairs for transmission to the Governor and the General Assembly of this Commonwealth, on or before the first day of March in each year. It shall also be the duty of the Chief of the Bureau of Mines to see that said reports, or copy of them, are placed in the hands of the Public Printer for publication at the same date; the same to be published under direction of the Secretary of Internal Affairs as other reports of his Department are now required by law to be published, and in order that the Chief of said Bureau may be able to prepare, compile and transmit his annual report to the Secretary of Internal Affairs within the time herein specified, the mine inspectors are hereby required to deliver their annual reports to the Secretary of Internal Affairs on or before the fifteenth day of February in each year. In addition to the annual reports herein required of the mine inspectors, the said mine inspectors shall furnish the Chief of the Bureau of Mines, monthly and also such special reports or information on any subject regarding mine accidents or other matters pertaining to mining interests, or the safety of persons employed in mines as he at any time may require or may deem necessary in the proper and lawful discharge of his official duties. The Chief of the Bureau of Mines shall also establish as far as may be practicable a uniform style and size of blanks for the annual, monthly and special reports of the mine inspectors, and prescribe the form and character of subject matter to be embraced in the text and the tabulated statements of their reports. The Chief of the Bureau of Mines is hereby authorized to make such examinations and investigations as may enable him to report upon the various systems of coal mining practiced in the State, method of mining, ventilation, machinery employed, structure and character of the several coal seams operated, and of the associated strata, the circumstances and responsibility of mine accidents, economy of coal production, coal waste, area and exhaustion of coal territory, and such other matters as may pertain to the general welfare of coal miners and others connected with coal mining, and the interests of coal mine owners and operators in this Commonwealth.

Section 6. The Chief of the Bureau of Mines shall keep in his office a journal or record of all examinations made and work done under his administration, and copies of all official communications, and is hereby authorized to procure such books, instruments and chemical or other tests as may be found necessary to the proper discharge of his duties under this act, at the expense of the State. All instruments, plans, books and records pertaining to the office shall be the property of the State, and shall be delivered to his successor in office.

Section 7. The Chief of the Bureau of Mines shall at all times be accountable to the Secretary of Internal Affairs for the faithful discharge of the duties imposed upon him by law, and the administration of his office and the rules and regulations pertaining to said Bureau shall be subject to the approval of the Secretary of Internal Affairs, who is hereby empowered to appoint an assistant to the Chief of the Bureau, at a salary of fourteen hundred dollars per annum, and a messenger at a salary of three hundred dollars per annum: And provided further, That the salaries of the Chief of the Bureau of Mines, his assistant and the messenger, shall be paid out of the State Treasury in the manner as other employes of the Department of Internal Affairs are now paid. Provided, That the Chief of said Bureau of Mines may be removed or suspended at any time by the Secretary of Internal Affairs, when in the opinion of said Secretary there has been a neglect of duty or a failure to comply with the law, or the instructions of the Secretary of Internal Affairs.

Section 8. No person who is acting as a land agent, or as manager, viewer or agent of any mine or colliery, or who is interested in operating any mine or colliery, shall at the same time serve as Chief of the Bureau of Mines under the provisions of this act.

Section 9. That the mine inspectors of each district of this State shall, within six months after the final passage and approval of this act, deposit in the Bureau of Mines an accurate map or plan of such coal mine, which may be on tracing muslin or sun print, drawn to a prescribed scale; which map or plan shall show the actual location of all openings, excavations, shafts, tunnels, slopes, planes, main headings, cross headings, and rooms or working places in each strata operated; pump, fans or other ventilation apparatus, the entire course and direction of air currents, the relation and proximity of the workings of such coal mines to all other adjoining mines or coal lands, and the relative elevation of all tunnels and headings, and of the face of working places near to or approaching boundary lines or adjacent mines; and on or before the close of each calendar year transmit to the Chief of the Bureau of Mines a supplemental map or plan showing all excavations, changes and additions made in such mine during the year, drawn to the scale of the first mentioned map or plan. All such maps or plans to be and remain in the Bureau of Mines as a part of the records of that office.

Section 10. All acts or parts of acts inconsistent with this act be and the same are hereby repealed.

Approved—The 15th day of July, A. D. 1897.

DANIEL R. HASTINGS.

REPORT

OF THE

BUREAU OF MINES

INTRODUCTION

The year 1902 was the most prosperous for all interested in bituminous mining of any year since mining first was commenced in Pennsylvania, and it would have been far more prosperous had the railroads been enabled to supply the operators with sufficient transportation to carry the coal and coke where the demand for it was greatest.

The year opened very prosperously for the miners and shippers of anthracite coal, but the advent of the great strike blasted the hopes of both operators and operatives. After the strike had been declared off and operations were resumed, the demand for anthracite coal became very great, as winter was approaching and there was only a limited supply in the large cities; in fact, it was almost impossible to secure any except at fabulous prices. It is claimed that many of the individual operators realized enough during the latter part of October, after mining had been resumed, and in November and December, to pay the costs of the long strike, besides having a larger surplus than if the strike had not occurred. Be that as it may, it is a fact that some of the individual operators received for their product from five to eight dollars per ton at the breakers, which excess was paid largely by poor people in the great cities.

In justice to the great railroad companies, which are the owners of about 66 per cent. of the anthracite mines, it must be acknowledged that they showed a spirit of humanity and Christian charity by selling their product at reasonable figures, or about \$1.00 per ton more than they had received previous to the strike.

It is proper here to remark that in the opinion of the writer, the maximum production has been reached in the anthracite region, and I have had no reason to qualify the statement made in the report of 1901, that about 200,000 tons per day is the maximum quantity per day that can be produced in the anthracite region, when the demand will warrant the operators in working their mines from 240 to 250 days per year.

The tonnage from the anthracite region has been greatly increased by the production from washeries, as for 1901 the production from this source was 1,794,521 tons, and for 1902 the production was 2,648,029 tons.

So far the production of bituminous coal is controlled by the demand and the ability of the railroads to transport it to market.

The production of bituminous coal for 1901 was an average of 375,000 tons per day worked, which could easily have been increased to 450,000 tons, which would be an increase of only 20 per cent. per day, and if the demand should be such that 240 days per year would be the average time worked, the bituminous coal mines of this State could produce about 108,000,000 tons per year.

The bituminous mines were operated during 1902 an average of 220 2-3 days, and the average daily production was 447,720 tons, an increased daily production of 72,720 tons over that of 1901.

There were 456 fatal accidents in and about the bituminous mines during 1902, as against 301 during 1901, an increase of 155 for 1902, but this increase was in a great measure caused by the terrible calamity at the Rolling Mill mine on July 10, in which 112 persons lost their lives by an explosion of gas.

There were 861 persons severely injured in and about the bituminous mines in 1902, as against 656 in 1901, an increase of 205 for 1902, which is not so great when the enormous production of coal is considered; besides, a great many of these accidents were of a very trivial nature, that probably did not prevent the injured person from working for more than a day or two. The production of coal per each fatal injury was 216,987.

If the 112 fatal accidents that occurred through the explosion at the Rolling Mill mine were eliminated, there would have been an average production of 287,635 tons for each fatality.

Of the fatal accidents in and about the bituminous mines, 442, or 96.93 per cent., occurred inside, and 14, or 3.07 per cent., outside.

The production of bituminous coal in 1902 was 98,946,203 tons

from mines that are inspected and come under the provisions of the law, while from small mines, where fewer than ten persons are employed, the production was 885,718 tons, making the total production reach the enormous figures of 99,831,921 tons.

The production of bituminous coal for 1901 was 80,914,236 tons from mines that came under the law, which is an increase in 1902 for these mines of 18,031,967 tons.

The production from anthracite mines for 1901 was 59,995,941 tons, and for 1902, 36,911,554 tons, being a decrease for 1902 of 22,994,397 tons.

The combined production of anthracite and bituminous coal for 1901 was 140,820,187 tons, while for 1902 it was 135,857,757 tons, a decrease for 1902 of 4,962,430 tons.

It is interesting in connection with the mining of bituminous coal to note the changes in the method of mining. In 1902, 36,224,155 tons of coal, or 36.81 per cent., were mined by the use of mining machines. These machines were in use in 317 mines, 2,812 of the various types being used, 969 of which were operated by electricity and 1,843 by compressed air; 62,722,048 tons were mined by pick.

There has been some criticism upon the statement made in the report of 1901 that the occupation of the miner can be classed as extra hazardous in as great a degree as that of locomotive engineers, firemen and brakemen, and, consequently, mine workers should be especially well paid. The writer will now emphasize what he asserted in the last report upon that subject, as he has known and faced the dangers of both a miner and laborer. Enumerated as non-fatal accidents are hundreds of cases of persons who have lost legs, arms and eyes, and have sustained fractures of skulls and limbs, and who, in consequence, are incapacitated for any work in or about the mines, and the writer reiterates what he published in 1901, that the attention of philanthropists of this and other states, and of men who have accumulated vast wealth in the business of coal mining, should be called to the necessities of these poor victims of accidents, and they should provide them with a place wherein they could be fitted for lives of usefulness in occupations suited to their disabilities.

If this class of people will not assist in the manner indicated, then it is the opinion of the writer that the State should impose a tax of a half cent per ton on all coal shipped to market. Within the next two years the shipments of coal will probably reach at least 150,000,000 tons which, at a tax of half a cent per ton, would yield \$750,000. This tax divided equally between the owners of coal lands and operators, would mean that each interest would pay \$375,000 per year. This would scarcely be felt by the parties taxed, but it would furnish a sum that would be ample to provide

for institutions where the crippled or those otherwise incapacitated for performing manual labor could be instructed; also, it would provide a fund for the relief of the widows and orphans of those whose lives had been lost in mine accidents.

The dangers attending anthracite mining are as 3 to 5 compared with bituminous mining, and one of the greatest causes of danger is the great consumption of high explosives in the anthracite, as compared with the bituminous region. The report for 1901 showed that only 1.42 tons of anthracite coal were loosened by each pound of explosive used, while in the bituminous region each pound of explosive loosened 9.46 tons. During 1902, 10,564½ tons of black powder and 1,085½ tons of dynamite were used in the anthracite mines. In the bituminous mines in 1902, there were 4,983 tons of powder and 460 tons of dynamite used in the production of 98,946,203 tons of coal. In the anthracite region the production was 36,911,554 tons.

In the anthracite mines there were produced, in 1902, only 1.12 tons of coal for every pound of explosive used, while in the bituminous mines 9.09 tons of coal were produced for every pound of explosive used.

For some reason, neither region produced quite as many tons of coal for every pound of explosives as were produced in 1901.

The number of employes in and about the anthracite mines in 1902 was 148,141; the number employed in 1901 was 146,651, an increase of 490 in 1902, but in 1901 they worked 194½ days, while in 1902 only 116 days' work was done.

Again, I wish to enter my solemn protest against the use of electricity in the coal mines of this State, unless wires can be so protected as to prevent its being a menace to life. Had I authority, I would prohibit its use in any form in gaseous mines, as it is my firm belief, if the use of it is not prohibited, that sooner or later there will be a terrible loss of life from this cause.

Seven lives were lost from this cause in 1902 and the same number in 1901, making fourteen lives sacrificed from the use of this deadly agent in two years. This adds another to the great number of perils incident to the mining of coal.

Table showing the number of each class of employes in each Anthracite district for the year 1902.

Districts.	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.										
	Mine foremen.	Assistant mine foremen.	Fire bosses and assistants.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	Pumpmen.	Company men.	All other employes.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers (boys).	State pickers (men).	Bookkeepers and clerks.	All other employes.	Total outside.	Grand total, inside and outside.
First,	4	35	40	5,56	4,373	1,883	418	122	84	648	13,729	20	28	244	437	1,088	794	58	2,082	4,761	18,40
Second,	5	29	95	4,60	3,396	1,912	511	131	969	794	13,288	21	55	243	361	1,054	468	9	2,054	3,594	18,229
Third,	6	30	100	4,816	3,576	1,790	451	111	1,015	680	12,63	19	46	394	524	1,380	410	103	2,702	5,584	18,197
Fourth,	5	32	111	5,89	4,557	1,958	460	117	2,018	1,211	17,468	8	42	336	696	2,161	556	92	3,161	7,376	24,764
Fifth,	4	37	47	3,114	1,693	755	291	135	89	2,242	8,25	10	47	393	607	1,015	46	96	3,497	6,127	14,361
Sixth,	4	30	132	4,143	3,157	774	270	106	87	2,611	12,273	18	46	368	820	2,330	984	93	3,946	8,065	20,878
Seventh,	4	37	136	5,46	2,685	966	271	131	1,616	1,811	12,616	11	40	27	660	1,982	371	76	3,833	7,246	19,858
Eighth,	44	22	112	3,43	1,405	547	156	47	93	1,820	8,211	27	43	224	574	1,220	437	67	2,556	5,142	13,383
Totals,	38	261	824	36,32	25,443	10,595	2,348	803	9,316	10,893	98,377	130	338	2,431	1,679	13,133	4,520	680	23,824	49,762	148,141

Table showing causes of fatal accidents and number attributable to each cause that occurred in and about the Anthracite mines,
also the number of wives left widows and children orphaned by reason of such accidents for the year 1902.

Causes of Accidents.	1st District.		2d District.		3d District.		4th District.		5th District.		6th District.		7th District.		8th District.		Total.		Percentage.	
	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.
By falls of coal, slate and roof,	1	.....	9	.....	22	.....	16	.....	6	.....	27	.....	10	.....	10	.....	116	.....	47.35	.....
By mine cars and machinery,	5	.....	5	.....	5	.....	1	.....	9	.....	1	.....	9	.....	4	.....	42	.....	17.14	.....
By explosions of gas and dust, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	35	.....	8.16	.....
By explosions of powder, blasts, etc., .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	20	.....	8.16	.....
By falling into shafts, slopes, etc.,	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	22	.....	9.16	.....
By suffocation, etc., .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	13	.....	5.3	.....
By mules, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	1.22	.....
From miscellaneous causes, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	0.81	.....
Totals,	99	7	24	1	40	8	41	11	21	5	40	12	41	5	17	6	245	59	81.6	18.34

Number of widows, 146.

Number of orphans, 377.

Table showing causes of non-fatal accidents and number attributable to each cause, that occurred in and about the Anthracite mines for the year 1902.

Causes of Accidents.	1st District.		2d District.		3d District.		4th District.		5th District.		6th District.		7th District.		8th District.		Total.		Percentage.	
	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.
By falls of coal, slate and roof.	26	...	33	...	27	...	44	...	8	...	19	...	12	...	14	...	183	...	34.92	...
By mine cars and machinery.	12	4	29	6	18	9	28	16	8	3	1	1	5	10	10	14	111	63	21.18	53.81
By explosions of gas and dust.	5	...	5	...	16	...	4	...	1	...	11	...	12	...	11	...	65	...	12.40	...
By explosions of powder, blasts, etc.	5	...	18	...	24	...	8	...	3	...	7	...	6	...	8	...	79	...	15.07	...
Falling into shafts, slopes, etc.	1	...	...	...	...	...	2	...	1	...	2	...	1	...	1	...	8	...	1.62	...
By suffocation. ....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
By mules.	4	...	7	...	7	...	8	...	...	...	1	...	4	...	1	...	29	...	5.53	...
Miscellaneous causes.	3	...	7	4	9	5	10	14	1	10	14	10	4	7	4	4	49	54	9.35	46.15
Totals.	56	4	99	10	101	14	104	30	22	13	55	11	41	17	46	18	524	317	80.99	19.01

ACCIDENTS IN COAL MINES

A great deal has been said and written about the frequency of accidents in and about the coal mines, and the officials of the mines, as well as the Mine Inspectors, have been censured because they have been unable to reduce the number.

For several years the Mine Inspectors have reported the accidents to the Bureau of Mines under the following heads, viz: Those "Caused by carelessness of victim," "Caused by neglect or carelessness of others," "Unavoidable accidents" and those for which the responsibility could not be fixed.

I have examined thoroughly the reports of fatalities made by the Inspectors, and the following are the results:

In and about the anthracite mines for the year 1902, 300 lives were lost, of which 150, or 50 per cent., were caused by "carelessness of the victims;" 27, or 9 per cent., by "carelessness of others;" 103, or a little more than 34 per cent., "were unavoidable," while in 20, or 6.66 per cent., the responsibility was not fixed.

In and about the bituminous mines for 1902, 456 lives were lost, of which 229, or a little more than 50 per cent., were through "carelessness of victims;" 116, or more than 25 per cent., were through "carelessness of others;" 103, or a little more than 22.5 per cent., were designated as "unavoidable," while the number in which the responsibility was not fixed was 8, or about 2 per cent.

All the Inspectors agree that about 50 per cent. of accidents are caused by the carelessness of the victims, which is a sad commentary, and these results will not be changed unless those directly interested will take all proper and needful precautions to guard against accidents.

The fatal accidents in the anthracite districts were from the following causes: Falls of coal, slate and roof, 116, or 47.35 per cent.; mine cars, 42, or 17.14 per cent.; explosions of gas, 20, or 8.16 per cent.; explosions of powder and blasts, 32, or 13.06 per cent.; and from miscellaneous causes, 22, or 9 per cent.

Of the total number of fatalities, 81.66 per cent. were inside the mines, and 18.34 per cent. were outside. Of the 250 lives that were lost inside, 22 were by six accidents, viz: four explosions of gas, by which 14 were killed; one explosion of dynamite, by which 5 lives were lost, and one accident by mine cars, causing the loss of 3 lives. All the others were by single accidents.

In the bituminous mines the percentages are somewhat different as to causes of fatal accidents. By falls of coal, slate and roof, 223

lives were lost, or 50.45 per cent.; by cars, 47, or 10.63 per cent.; from explosions of gas, 126, or 28.50 per cent.; by explosions of powder, blasts, etc., 8, or 1.81 per cent.; from electric shocks, 7, or 1.58 per cent., and from miscellaneous causes, 31, or 7.01 per cent.

Of the fatalities in and about the bituminous mines, 96.93 per cent. occurred inside and 3.07 per cent. on the surface.

In the bituminous mines, 12 accidents caused the loss of 140 lives, six of which were explosions of gas, whereby 125 lives were lost. This includes the catastrophe at Johnstown, which is fully described in another part of this report, in which 112 persons were killed. By three accidents from falls of coal or slate, 8 lives were lost; by an explosion of a blast 2 lives were lost; by falling from a cage down a shaft, 3 lives were lost at the same time, and 2 lives were lost by one accident from cars.

MINE INSPECTIONS

Mine inspections were conducted during the year with the same regularity as in former years. The Bituminous Inspectors made 2,410 inspections. Some of the mines were inspected six or eight times and others only twice.

The increase in the number of Bituminous Inspectors from twelve to fifteen will result in more frequent inspections being made, and let us hope that the increase will have a tendency to reduce the number of accidents, which is "a consummation devoutly to be wished for;" also, in the improvement of ventilation in some of the non-gaseous mines.

The eight Anthracite Inspectors made 638 inspections, a smaller number than were made in 1901. This is accounted for by the fact that the mines were closed by the great strike for nearly six months. The Inspectors also made more frequent visits to the more important mines and fewer to the smaller ones.

Under the mine law as amended, the number of Anthracite Inspectors has been increased from eight to sixteen, and it is earnestly hoped that the increase in the number of Inspectors will have a tendency to reduce the number of accidents by more frequent visits, yet I am not very sanguine of such a result.

Under the provisions of the anthracite mine law, each Inspector is directed to visit the face of each working place at least once in sixty days, yet any person who is familiar with conditions in the anthracite mines will know that it is a physical impossibility for him to comply with the law in that respect, and I am free to assert there is no necessity for each working face to be visited once every sixty days. Some of them should be inspected more frequently

than the law provides, while others do not require the same attention. In the opinion of the writer, such frequent visits by the Inspectors are not necessary in gaseous mines, but in non-gaseous ones he cannot make too many visits.

VENTILATION OF ANTHRACITE MINES

By a careful analysis of Table I, it will be seen that the ventilation in mines of the anthracite districts is fairly well up to the standard. In the First District, in mines where the ventilation was the poorest, there was a minimum of 178 cubic feet of air per minute for each employe inside; the maximum quantity in gaseous mines was 800 cubic feet, and the average quantity of air in circulation per employe inside was 500 cubic feet.

In the Second District, the minimum quantity in non-gaseous mines per each employe inside was 231 cubic feet per minute; the maximum quantity in gaseous mines was 850 cubic feet, and the average for all mines in the district was 400 cubic feet per minute.

In the Third District, the minimum quantity in non-gaseous mines was 250 cubic feet per minute for each employe inside; the maximum quantity in gaseous mines was 900 cubic feet per each employe, and the average quantity in all mines in the district was 550 cubic feet.

In the Fourth District, there was a minimum in each non-gaseous mine of 200 cubic feet per minute for each inside employe, and a maximum in gaseous mines of more than 900 cubic feet per minute. The average was 525 cubic feet per minute for each employe inside.

Owing to a change of Inspectors in the Fifth District, there was no report received from it.

In the Sixth District the report shows that there was a minimum of 150 cubic feet of air per minute in circulation in each non-gaseous mine, for each employe inside. The maximum in gaseous mines was 634 cubic feet per minute, and the average for all mines in the district was 260 cubic feet per minute for each employe inside.

Owing to the resignation of the Inspector of the Seventh District no report was received from it.

In the Eighth District, the report shows a minimum quantity of 150 cubic feet of air in circulation in each non-gaseous mine, and a maximum of 650 cubic feet per minute in gaseous ones. The average quantity was 275 cubic feet per minute per employe.

The average for all the districts shows that there were 450 cubic feet of air per minute in circulation for each employe inside of the mines.

REASONS WHY SYSTEMATIC PROPPING SHOULD BE ADOPTED IN COAL MINES

In the last report of this Bureau, in an article on the frequency of fatal accidents from "falls," the following remarks occur:

"During the past twenty years more than 50 per cent. of fatal accidents were caused by 'falls,' but there is no reason why the number from this cause should not be reduced at least 50 per cent. If as much care were taken to guard against falls of coal, roof and sides as is being taken in regard to ventilation for the purpose of keeping the mines clear of what is generally called the 'deadly' gas, a stringent rule should be adopted against the more deadly 'falls.'"

The number killed by gas in the anthracite mines during the past twenty years was 663, or about 9 per cent. of the whole number killed inside of the mines, while the number killed by "falls" during the same period was 3,521, or 50 per cent., or an average of five and one-half persons killed by "falls" to every one killed by explosions of gas; and about the same percentage is found in the bituminous region where, of course, the total number of accidents is not so great.

If the operators would provide a suitable person, who might be designated a timber boss, and whose sole duty should be to look after the safety of the working places and traveling roads, and to see that all dangerous parts were taken down or properly supported by timber, or otherwise, it would certainly lessen the danger from "falls."

A few of the superintendents of coal companies have objected to the remarks on this subject that were incorporated in the report of 1901, urging as a reason that it would add greatly to the expense of producing coal, as the services of three or four persons would be required to attend to the work of superintending the propping. Of course, it is conceded that it would necessitate the employment of from one to three additional men, according to the size of the mine. In a mine where three timber bosses would be required the output would be from 1,500 to 2,000 tons per day, say, an average of 1,750 tons, and the wages of the men would be three dollars each per day, or a total of nine dollars. This would entail only an additional cost of a half cent per ton, which would scarcely be felt by the operator. But even if no return were received for the additional outlay, the writer is of the opinion that the employment of such men, who would attend to their duties and who would be given authority to punish carelessness in some

manner, would save many lives that are now lost through neglect, carelessness or lack of knowledge of the dangerous conditions that environ them. Many employes, especially in the bituminous mines, who mine or load after the mining machines, and have supervision of timbering, do not understand the English language, and being unaccustomed to the perils of mining, have no knowledge of the dangers that surround them.

If every humane superintendent would at once adopt these suggestions, I am sure that the number of accidents from falls would be greatly reduced, for if this were done a rule for systematic propping could be introduced and enforced. At present, the visits of the mine foreman are not sufficiently frequent to instruct the ignorant miner as to his danger, nor to compel the "old miner," who thinks he knows it all, to properly care for his safety.

One large mining company in France has adopted the following rules, viz:

A. Systematic timbering, the timber being inserted as soon as room is made for it.

B. The use of iron bars to support the roof temporarily in advance of the last setting of timber until room is secured for another setting.

In the report of 1901 the system in use by the French company was explained. A light modification of that system would render it applicable to the bituminous mines.

The Royal British Commission that was sent to France to investigate the subject of systematic propping, reported as follows:

"We agree with the emphatic opinion as expressed by the French engineer as to the necessity of enforcing not only systematic timbering, but also the setting of timber immediately when the distance fixed by regulation has been attained."

It can be seen by the following that the loss of life by "falls" during the five years, 1895 to 1900, has been lower in the Courrieres colliers than in mines in other parts of France, or in Great Britain, Germany, Illinois, or in Pennsylvania in the anthracite or bituminous regions:

For every 1,000 persons employed in the Courrieres colliery, only .126 lost their lives by falls; in other parts of France the loss per 1,000 employed was .58, in Great Britain .78, in Germany 1.22, in Illinois 1.34, in the bituminous mines of Pennsylvania 1.35, and in the anthracite mines 1.50.

With the adoption of systematic propping, and with the employment of competent men who would be empowered to enforce the regulations, it is the opinion of the writer that fatalities from "falls" in our bituminous mines can be reduced in the near future to those of France or Great Britain. Perhaps, accidents from this

cause in the anthracite region cannot be reduced to such a low average as in the above countries, yet I am of the opinion that they can be reduced 50 per cent. or .75 for every 1,000 employees.

The writer has gone into these details in the hope that some of the larger companies will introduce this system; otherwise the law-making power of the State should be invoked at the session of 1905 to enact some legislation upon the subject.

Anthracite Coal Counties, as redistricted to conform with amendments to Article 2 of Mine Law, approved June 8, 1901, giving the number of collieries, employees and production of each district, computed from the report of the Bureau for 1901.

Districts.	Counties.	Number of collieries.	Number of employees.	Number of tons produced.
First,	Lackawanna,	18	9,339	3,875,397
Second,	Lackawanna, Susquehanna and Wayne,	21	9,431	3,873,057
Third,	Lackawanna,	21	8,809	4,268,554
Fourth,	Lackawanna,	19	9,045	4,317,411
Fifth,	Luzerne,	23	10,219	3,247,542
Sixth,	Luzerne and Sullivan,	23	10,750	4,078,191
Seventh,	Luzerne,	17	11,563	4,514,170
Eighth,	Luzerne,	17	10,549	4,529,725
Ninth,	Luzerne,	27	11,743	4,717,545
Tenth,	Schuylkill,	20	8,699	3,229,980
Eleventh,	Schuylkill,	12	9,274	3,768,862
Twelfth,	Schuylkill,	19	7,511	2,911,655
Thirteenth,	Schuylkill,	19	7,570	3,472,440
Fourteenth,	Northumberland,	28	14,186	4,850,011
Fifteenth,	Columbia and Dauphin,	7	4,682	1,821,816
Sixteenth,*	Carbon,	7	4,366	1,667,394

*This district will have to be included in the Ninth district until January, 1907, giving the Inspector of that district 34 collieries and 16,109 employees, with a production of 6,372,938 tons, nearly four times the production of the Fifteenth district. The amendment arbitrarily makes the county lines the district boundary lines, therefore the above is the best arrangement that can be made under this amendment, which is entirely unfair to the inspectors, to the employees and to the operators. During the year 1901, 298 Anthracite collieries produced 59,905,951 tons, and the number of employees was 147,651. If the law had been amended so that these collieries could have been apportioned among the 16 inspectors, each one would have had 18 or 19 collieries and from 9,000 to 9,500 employees with an average production of about 3,700,000 tons. If these figures are compared with those of the foregoing table, it may be seen at a glance how unevenly the work is distributed amongst the inspectors, as the districts are at present constructed.

Bituminous Districts, as rearranged in January, 1903, in conformity with the law approved 1893, giving the number of collieries, employes and production of each district, computed from the report of this Bureau for 1901.

Districts.	Names of Counties.	Number of collieries.	Number of employes.	Number of tons produced.
First,	Fayette, Green, Washington and Westmoreland,	61	8,329	7,408,124
Second,	Indiana and Westmoreland,	63	8,015	5,463,468
Third,	Armstrong, Butler, Clarion, Lawrence and Mercer,	85	4,703	2,661,353
Fourth,	Clearfield, Clinton, Elk, Jefferson, Lycoming, McKean and Tioga,	72	8,647	5,221,856
Fifth,*	Fayette,	78	11,002	6,094,223
Sixth,	Cambria and Somerset,	79	6, 91	5,040,201
Seventh,	Allegheny, Beaver and Washington,	63	7,853	5,988,04
Eighth,	Centre and Clearfield,	111	6,115	3,383,284
Ninth,	Fayette and Somerset,	61	8,623	7,724,111
Tenth,	Cambria, Bedford, Blair and Huntingdon,	83	6,34	3,521,119
Eleventh,*	Fayette and Westmoreland,	63	10,450	8,113 5 1
Twelfth,	Armstrong, Clearfield, Indiana and Jefferson,	60	7,695	5,6 9, 522
Thirteenth,	Allegheny, Washington and Westmoreland,	65	6,681	5,159, -59
Fourteenth,	Allegheny, Beaver and Westmoreland,	60	7,125	5,381,133
Fifteenth,	Cambria, Centre, Clearfield and Indiana,	87	7,152	4,068,577

*The great excess in the number of employes in the Fifth and Eleventh Districts is caused by the large number employed in the manufacture of coke.

The Bituminous Mine Law provides, in section 5, article 10, that "the board of examiners may also, at their meeting, or when at any time called together by the Governor for an extra meeting, divide the bituminous coal regions of the State into inspection districts, no district to have less than sixty nor more than eighty mines, and as nearly as possible equalizing the labor to be performed by each Inspector, and at any subsequent calling of the board of examiners this division may be revised, as experience may prove to be advisable."

In the last three years the board of examiners has redistricted the bituminous regions twice, once at a regular meeting, and the second time they were called together by the Governor at the suggestion of the Chief of the Bureau of Mines, as it was found that the Inspectors were unable to comply with the part of the act which provided that not more than ninety days shall elapse between the visits of the Inspectors.

At the first redistricting it was thought that two additional Inspectors, making the number twelve, would be sufficient, but it was soon found that even twelve inspectors could not comply with the provisions of the act, and the Chief of the Bureau suggested to the Governor that the number be increased to fifteen.

The board of examiners made an effort to comply with the pro-

visions of the law, and met with some success, but after doing the best they could, they failed, as may be seen by looking at the foregoing table.

While section 5 of article 2 gives the board considerable power, yet it arbitrarily says that "no district shall contain less than sixty or more than eighty mines." With this sentence left in the section, no board can make a fair division of work between the Inspectors. If this obnoxious section were eliminated, the board could intelligently divide the labor between the Inspectors without regard to the number of mines.

I am not advocating here an increase in the number of Inspectors, but do advocate the amending of section five, or in a few years more the number of inspectors will have to be increased again. In my opinion, we have enough Inspectors in this State, even if the production were doubled, but of this I will treat in another place.

By comparing the First District with the Eighth, it will be seen that one has only 61 mines while the other has 111, yet the production of the district with the smaller number of mines is more than double that of the district having the greater number of mines.

If it were possible to make an even distribution of the 1,082 bituminous mines among the fifteen Inspectors, each one would have an average of 72 mines, of 7,840 employes and an average production of nearly 5,400,000 tons. Even that would not be a fair division of the work among the Inspectors, as several of the districts have more than 4,000 persons employed outside, leaving the number employed inside only about 3,840.

In my opinion, the division of the Inspection Districts in the State should be made by the Chief of the Bureau of Mines, without any arbitrary restrictions as to county lines or number of mines.

It may be of interest at this time, when the number of Inspectors in this State has been increased over 50 per cent., and when the public clamor is so loud against employing children of the ages of 12 and 13 years in and about the mines, to pause and endeavor to find out what is being done in other countries, notably in the United Kingdom, comprising England, Scotland, Wales and Ireland. We find that in the year 1902, 3,264 coal mines, 142 iron mines and 722 other mines were in operation. Besides the mines, there were 4,751 quarries in operation during the same year. Under the law, the mines in the United Kingdom are divided into three classes: Those under the Coal Mine Act, including mines of coal, fire clay, stratified iron ore and shale; under the Metalliferous Mine Act are included all mines and underground workings which are not under the Coal Mine Act, while under the Quarry Act are in-

cluded all open workings not more than twenty feet deep in which are obtained slate, stone and other materials.

During the year 1902, 1,018 lives were lost in coal mines in the metalliferous mines 29 lives were lost, and 119 lives were lost in quarries. The number of employes inside of the coal mines was 636,400, and on the surface of coal mines 156,248 were employed. Inside of the coal mines the ages ranged from 13 years upward, and the ages of the employes on the surface ranged from 12 years upward.

The iron ore mines, coming under the Coal Mine Act, numbered 142; the inside employes numbered 12,229, and 4,280 were employed on the surface. The ages of the inside employes were from 13 years upward, while the ages of those employed on the surface ranged from 12 years upward.

The number of metalliferous mines in operation during 1902 was 722; the inside employes numbered 17,977, while 12,014 were employed on the surface. The ages of the inside employes ranged from 13 years and over, and the ages of those on the surface 12 years and over.

The number of quarries in operation during 1902 was 4,751; inside of the quarries 39,938 persons were employed, while the number employed on the surface was 20,188. The ages inside and outside were from 12 years upward.

The total number of employes inside the mines during 1902 was 666,626, and on the surface 173,552, a total of 840,178.

Including the employes of the quarries, we find that in the United Kingdom during 1902, over 900,000 persons were employed, subject to the several acts.

If the mines and employes were equally divided among the 13 Inspectors and the 25 Assistant Inspectors (a total of 38), each one would have 118 mines and nearly 24,000 employes under his charge. In this I have taken no account of the quarries where 119 lives were lost during 1902. How does this compare with the number of mines and number of employes in each anthracite and bituminous district in this State? *

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ES KILLED AND INJURED. NUMBER KEGS OF POWDER AND POUNDS OF DYNAMITE USED, IN THE ANTHRACITE
ENDING DECEMBER 31, 1902.

[illegible]

Number of gaseous and non-gaseous mines, number of foremen, assistants and fire bosses, production of coal from gaseous and non-gaseous mines, and washeries, and percentage of production from each, in the Anthracite region for 1902.

Districts.	Number of gaseous mines in each district.		Number of foremen and assistant foremen in gaseous mines in each district.		Number of fire bosses in each district.		Number of non-gaseous mines in each district.		Number of foremen and assistant foremen in non-gaseous mines in each district.		Production in tons from gaseous mines in each district.		Production in tons from non-gaseous mines in each district.		Percentage of production from gaseous mines.		Percentage of production from non-gaseous mines.		Percentage of production from washeries.	
	12	37	49	60	46	2,234,573	2,020,658	477,700	45.02	1.73	13.90	9.78	45.02	1.73	13.90	9.78	45.02	1.73	13.90	9.78
First,	31	80	90	25	11	5,106,736	105,511	810,478	84.37	1.58	11.70	11.70	84.37	1.58	11.70	11.70	84.37	1.58	11.70	11.70
Second,	48	78	161	7	4	3,741,484	741,122	592,345	73.71	1.49	95.56	95.56	73.71	1.49	95.56	95.56	73.71	1.49	95.56	95.56
Third,	65	61	45	62	19	5,829,380	179,435	90,606	80.21	1.46	46,907	46,907	80.21	1.46	46,907	46,907	80.21	1.46	46,907	46,907
Fourth,	35	77	132	6	10	2,791,296	552,573	46,907	92.09	5.26	183,840	183,840	92.09	5.26	183,840	183,840	92.09	5.26	183,840	183,840
Fifth,	26	77	140	6	8	3,810,818	212,860	41,136	91.14	7.31	375,427	375,427	91.14	7.31	375,427	375,427	91.14	7.31	375,427	375,427
Sixth,	25	49	112	13	17	3,626,150	300,451	41,136	83.89	3.82	2,618,029	2,618,029	83.89	3.82	2,618,029	2,618,029	83.89	3.82	2,618,029	2,618,029
Seventh,	25	49	112	13	17	3,626,150	300,451	41,136	83.89	3.82	2,618,029	2,618,029	83.89	3.82	2,618,029	2,618,029	83.89	3.82	2,618,029	2,618,029
Eighth,	25	49	112	13	17	3,626,150	300,451	41,136	83.89	3.82	2,618,029	2,618,029	83.89	3.82	2,618,029	2,618,029	83.89	3.82	2,618,029	2,618,029
Totals and percentages, .....	.....	523	824	.....	125	29,797,196	4,466,341	2,618,029	80.72	12.10	7.17	7.17	80.72	12.10	7.17	7.17	80.72	12.10	7.17	7.17

STATEMENT—Showing the quantity of coal produced by each company that produced 700,000 or more tons, and the number of persons employed by said companies in the Anthracite districts during the year 1902.

Names of Companies.	Number of Inspection Districts.	Production of coal in tons.	Number of employes.
Philadelphia and Reading Coal and Iron Co., Delaware, Lackawanna and Western Railroad Co., Delaware and Hudson Canal Co., Lehigh Valley Coal Co., Lehigh and Wilkes-Barre Coal Co., Pennsylvania Coal Co., Pennsylvania Railroad Co., Lehigh Coal and Navigation Co., Temple Iron Co., Kingston Coal Co., Hillside Coal and Iron Co., Coxo Brothers & Co., G. B. Markle & Co.	Sixth, Seventh and Eighth, First, Second, Third and Fourth, Third, Fourth, Fifth, Sixth and Seventh, Fourth and Sixth, First, Second and Third, First, Second and Seventh, First and Second, First and Third, Fourth, First, Fifth and Sixth, Fifth.	5,534,892 4,469,847 3,291,550 3,055,119 2,657,457 1,698,413 1,629,371 1,471,790 1,023,573 866,793 684,396 628,571 608,166 476,295	27,458 12,865 12,011 9,838 7,841 6,738 6,321 5,970 5,311 3,427 2,384 2,165 2,371 2,353
Totals.		26,571,143	106,950

*Each of these companies produced more than 700,000 tons in 1902, and would have exceeded that quantity in 1902 but for the strike.

Production of coal in tons by districts in the Anthracite coal mines from 1893 to 1902 inclusive.

Districts.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.
First,	6,292,131.34	5,307,331	6,510,817	6,217,447	6,219,823	6,515,790	7,374,571	6,308,948.16	7,798,244	4,932,924
Second,	5,398,475.10	5,574,539	6,189,495	5,835,669	5,385,600	5,461,130	6,774,458	6,448,949.08	8,674,080	6,152,725
Third,	5,629,914.85	5,541,952	6,211,894	5,714,929	5,871,823	5,964,467	6,894,159	6,466,931.08	6,995,598	5,077,167
Fourth,	8,065,768.95	7,102,901	8,066,539	8,017,822	7,437,418	7,516,577	8,083,159	8,588,711.05	9,891,332	6,099,420
Fifth,	6,235,058.50	6,132,627	6,500,966	5,852,427	5,481,500	5,516,577	6,191,027	6,177,784.00	6,374,909	3,190,765
Sixth,	6,674,807.00	6,334,631	7,164,898	6,352,310	6,473,000	5,533,155	7,538,404	7,121,571.05	8,086,320	4,386,827
Seventh,	5,288,862.88	5,404,823	6,184,542	6,394,662	6,473,000	5,516,577	6,308,334	6,070,701.08	7,052,838	3,968,339
Eighth,	3,112,804.63	3,331,315	3,925,015	4,257,874	4,306,222	5,174,824	4,334,507	4,274,528.00	5,172,530	3,223,377
Totals,	47,179,533.25	45,496,179	50,847,104	48,074,330	46,947,351	47,145,174	54,034,224	51,217,318.00	59,905,951	36,911,544

Production of Anthracite coal in tons by counties from 1893 to 1902 inclusive.

Counties.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.
Carbon,	1,710,389.59	1,589,395	1,577,146	1,498,550	1,327,935	1,043,663	1,620,595	1,663,961	1,650,392	986,127
Columbia,	741,390.74	510,357	473,142	549,550	488,453	569,175	595,001	575,643	1,690,231	688,991
Dauphin,	640,725.17	699,067	715,869	793,295	682,842	667,460	739,757	805,656	1,741,582	337,583
Leakawanna,	11,097,530.25	11,240,382	11,813,822	11,638,479	11,946,871	11,588,801	13,248,949	12,282,108	15,307,440	10,581,901
Luzerne,	18,253,144.73	17,343,282	19,143,101	17,994,900	17,141,809	18,165,398	19,899,742	19,179,573	21,396,372	13,016,114
Northumberland,	3,763,193.97	3,896,660	4,157,144	4,117,589	3,774,667	3,519,395	4,339,547	4,188,343	4,840,069	2,823,273
Schuylkill,	9,455,293.97	9,985,092	11,493,388	11,692,772	10,971,943	11,980,740	12,226,938	11,606,161	13,640,768	7,698,346
Sullivan,	79,118.00	.....	152,141	157,758	164,046	147,531	163,555	120,422	134,165	365,194
Susquehanna,	571,536.19	413,578	840,904	474,637	476,488	423,131	621,125	496,432	663,487	404,248
Wayne, .....	.....	.....	.....	.....	.....	.....	275,955	19,620	325,877	.....
Totals,	47,179,563.29	45,506,179	50,847,104	48,074,350	46,947,354	47,145,174	54,034,224	51,217,318	59,905,951	36,911,534

Number of employees in and about the Anthracite coal mines by districts from 1893 to 1902 inclusive.

Districts.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.
First,	15,637	16,014	16,272	17,604	18,066	17,890	17,143	17,285	18,773	18,490
Second,	14,423	15,627	16,299	16,353	16,598	16,728	17,239	17,289	18,023	18,220
Third,	15,778	16,965	17,413	18,377	17,550	18,081	17,156	18,600	17,654	18,197
Fourth,	22,790	22,764	23,067	23,683	23,650	23,377	23,688	23,067	24,317	24,764
Fifth,	17,540	18,361	18,667	17,588	17,119	16,649	14,293	15,111	16,168	14,361
Sixth,	20,362	20,130	19,810	20,979	21,056	20,159	19,905	20,278	20,277	20,818
Seventh,	18,367	19,121	19,399	20,185	19,670	19,557	20,317	20,655	19,844	19,856
Eighth,	10,777	10,734	11,396	13,335	13,492	12,965	12,682	12,041	12,655	13,383
Totals,	138,021	139,695	143,605	147,670	149,557	149,420	140,583	143,726	147,651	148,141

Number of employes in and about the mines of the Anthracite region by counties, from 1893 to 1902 inclusive.

Counties.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.
Carbon.....	4,410	5,591	4,382	4,153	4,748	2,986	2,338	2,517	6,365	3,805
Columbia.....	2,654	2,011	1,755	2,074	1,901	2,436	2,399	2,064	2,359	2,359
Daubigny.....	2,094	2,002	1,985	1,908	2,072	2,174	2,310	2,174	2,323	1,945
Lackawanna.....	29,021	30,629	30,367	32,711	33,872	32,422	30,866	29,814	25,398	25,533
Luzerne.....	51,392	52,984	55,798	56,717	55,138	52,782	52,782	53,740	51,280	52,688
Northumberland.....	12,487	13,870	14,322	14,787	15,138	12,871	14,697	15,105	14,187	14,783
Schuylk li.....	33,611	31,616	32,292	35,600	35,307	34,238	33,598	33,228	33,907	34,950
Sullivan.....	397	312	312	351	351	351	351	521	434	752
Susquehanna.....	1,045	1,012	2,191	1,186	1,231	1,193	1,210	1,250	909	1,386
Wayne.....	.....	.....	.....	.....	.....	.....	466	11	589	.....

BUREAU OF MINES.

List of fatal accidents that occurred in and about the Anthracite mines from 1893 to 1902 inclusive.

Districts.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.
First,	51	47	39	51	53	51	68	40	58	29
Second,	35	41	34	39	58	37	43	55	63	24
Third,	64	71	69	108	63	85	62	69	84	48
Fourth,	84	77	74	73	60	75	81	71	78	52
Fifth,	58	58	52	42	33	32	43	40	60	26
Sixth,	60	73	59	67	72	64	72	65	73	52
Seventh,	77	78	53	76	46	46	52	49	62	46
Eighth,	27	20	35	46	38	37	34	32	35	23
Totals,	456	446	421	502	423	415	461	411	513	300

List of non-fatal accidents that occurred in and about the Anthracite mines from 1893 to 1902 inclusive.

Districts.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.
First,	96	98	121	134	125	126	116	118	118	60
Second,	173	141	132	131	149	154	159	152	186	109
Third,	178	148	171	209	145	201	206	179	173	115
Fourth,	221	239	221	235	269	278	188	244	322	134
Fifth,	88	80	102	91	114	72	86	76	89	35
Sixth,	139	84	152	99	73	72	99	130	144	68
Seventh,	119	76	111	106	119	112	90	91	95	58
Eighth,	44	40	106	140	112	119	86	107	116	64
Totals,	1,069	921	1,075	1,165	1,106	1,134	1,030	1,067	1,213	641

Classification of employees who were killed or fatally injured in and about the Anthracite mines from 1883 to 1902 inclusive.

Years.	Inside Employees.						Outside Employees.								
	Mine foremen.	Fire bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys, etc.	All others.	Total inside.	Outside firemen.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers.	All others.	Total outside.	Grand total.
1883.	2	1	136	67	47	18	26	297	.....	7	11	7	1	26	333
1884.	1	1	136	81	28	13	30	286	.....	4	9	12	6	31	331
1885.	.....	.....	160	86	16	6	28	209	.....	6	7	13	9	34	333
1886.	.....	.....	131	68	18	18	24	243	.....	1	6	9	16	33	278
1887.	1	1	162	57	23	10	30	258	.....	3	3	9	13	31	29
1888.	1	1	169	87	33	9	30	288	.....	1	1	6	22	32	364
1889.	4	4	191	79	33	10	20	348	.....	1	9	10	16	37	385
1890.	1	1	146	95	37	7	26	318	.....	1	9	12	26	60	428
1891.	.....	.....	180	119	38	2	37	373	.....	1	3	11	25	41	428
1892.	3	3	189	120	39	8	16	373	.....	2	4	7	27	39	418
1893.	1	1	195	108	47	12	24	390	.....	1	4	11	41	56	446
1894.	.....	.....	218	91	38	5	32	385	.....	.....	.....	11	45	61	446
1895.	.....	.....	179	115	33	7	28	368	.....	.....	.....	12	46	61	446
1896.	3	3	294	134	46	10	48	440	.....	.....	.....	13	38	58	428
1897.	2	2	210	99	26	4	43	387	.....	.....	.....	13	31	53	402
1898.	4	4	176	124	33	6	22	370	.....	.....	.....	16	25	37	421
1899.	.....	.....	189	114	39	18	22	396	.....	.....	.....	18	46	53	441
1900.	.....	.....	181	95	33	8	27	352	.....	.....	.....	10	46	45	410
1901.	.....	.....	221	122	45	6	37	441	.....	.....	.....	9	46	59	471
1902.	.....	.....	111	62	27	5	31	244	.....	.....	.....	9	64	64	300

Number of fatalities and causes of fatal accidents that occurred in and about the Anthracite mines from 1883 to 1902 inclusive.

Years.	Inside of Mines.										Outside of Mines.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
	By Falls of		By Explosions of				By Falling Into				Total inside.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
			By mine cars.		Gas and dust.		Powder, dynamite.		Blasts, etc.									Shafts.		Slopes.		Man ways and breasts.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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*Nanticoke disaster; 26 persons were entombed by an inrush of quicksand.
†Twin shaft disaster; 58 persons were entombed.

Fatal accidents per each 1,000 employes in and about the Anthracite coal mines,
and tons of coal mined for each fatal accident from 1870 to 1902 inclusive.

Years.	Employes.	Fatal accidents.	Fatal accidents per 1,000 employes.	Number of tons of coal produced.	Number of tons mined for each fatal accident.
1870,	35,600	211	5.929	12,653,575	59,970
1871,	37,488	210	5.601	13,805,087	66,888
1872,	44,475	166	3.709	13,859,976	83,734
1873,	48,199	224	4.647	18,751,358	83,711
1874,	53,402	23	4.325	17,794,857	77,134
1875,	61,566	238	3.401	20,835,220	87,798
1876,	65,357	226	3.458	20,529,166	90,837
1877,	66,842	199	2.977	21,574,154	108,413
1878,	63,964	187	2.923	20,309,945	108,720
1879,	68,817	262	3.807	26,725,475	102,005
1880,	73,373	211	2.739	24,977,265	124,265
1881,	76,621	269	3.508	30,537,988	113,524
1882,	82,344	292	3.546	31,301,278	107,196
1883,	90,821	223	3.552	33,703,010	104,313
1884,	101,388	332	3.274	32,561,374	98,076
1885,	100,311	315	3.140	33,468,911	116,250
1886,	102,878	279	2.624	34,777,618	124,650
1887,	106,547	319	2.994	37,614,023	118,006
1888,	117,160	361	3.106	41,638,427	114,391
1889,	119,500	385	3.222	38,983,952	101,257
1890,	115,190	378	3.281	40,088,556	106,054
1891,	123,277	428	3.472	44,420,950	103,553
1892,	128,763	396	3.075	45,738,373	115,501
1893,	138,060	449	3.252	47,219,562	105,166
1894,	139,544	439	3.146	45,066,179	103,659
1895,	143,288	421	3.636	50,847,102	120,777
1896,	150,080	502	3.345	48,074,330	95,766
1897,	149,557	424	2.842	46,947,350	111,725
1898,	142,546	411	2.877	47,145,175	114,788
1899,	140,583	461	2.923	54,034,224	131,446
1900,	143,726	411	2.861	51,217,318	124,616
1901,	147,651	513	3.474	59,905,951	116,775
1902,	118,141	300	2.700	36,911,554	123,037

THE GREAT ANTHRACITE COAL STRIKE OF 1902

The strike that existed in the anthracite coal regions for approximately six months was, for the number engaged and involved in it, and the results brought about by it, the greatest labor difficulty that has ever occurred on this continent, if not in the world.

In 1901, the total production of anthracite coal was 59,905,951 tons, and the number of employes in and about the mines was 147,651. In 1902, the production was 36,911,554 tons, a decrease from that of the previous year of 22,994,397 tons.

The number of employes in 1902 was 148,141, a number greater than was employed in 1901, but the average number of days worked in 1901 was 194.5, while in 1902 the average was 116 days. At a conservative estimate, over 95 per cent. of this number were engaged in the strike, while the number indirectly affected by it is almost beyond computation, as iron works and industrial establishments of all classes were obliged to suspend operations for longer or shorter periods, until such changes could be made in their boilers as would enable them to burn bituminous coal.

The loss of time and consequent loss of earnings were not the only misfortunes brought about by this suspension of labor at the mines, as, of course, owing to the cessation of mining, the stock of anthracite coal in the cities and towns soon became exhausted, and the result was that what was on hand brought fabulous prices, advancing in some cases to \$20.00 per ton, thus rendering one of the greatest necessities of life one of its luxuries.

Of course, this state of affairs bore hardest on the poor of the cities, who, from necessity are obliged to purchase coal by the bucket, as they felt the pinch first. As the strike was not brought to a close until late in October, there was much suffering from cold, and, according to physicians, a great increase in mortality from pneumonia and other diseases of the lungs resultant upon poorly heated rooms and houses. But, like the proverbial "ill wind that does not blow good to somebody," this state of affairs in the anthracite region was the means of creating a great demand for bituminous coal, and the mines in that region were pushed to their greatest capacity, with the result that the production of bituminous coal increased from 80,914,236 tons in 1901 to 98,947,117 tons in 1902, while the number of employes in and about the bituminous mines increased from 117,602, in 1901, to 135,386, in 1902, and the price advanced to a figure never before known in the history of mining.

This Department has no intention of going into the question of the causes which led to this great disturbance in the labor world, nor of making any comment on the justice of either the

operators' or if the workmen's side of the question. Suffice it to say, that the strike commenced on May 12, and was the result of a demand made by the "United Mine Workers of America," through their president, Mr. John Mitchell, for an increase of wages and a reduction in the hours of labor to all employes who were paid by contract or day work. These demands were refused by the operators and a strike was ordered by the president of the United Mine Workers' Society. The causes that led up to the strike, however, had their origin more than a year previous, as, on February 15, 1901, a communication was sent to President Olyphant, of the Delaware and Hudson Company, as follows:

"Will you kindly wire if your company will participate in a joint conference with the Anthracite miners during the month of March, for the purpose of agreeing upon a scale of wages for a period which would be mutually agreeable to operators and miners?"

"Signed.

JOHN MITCHELL."

President Olyphant's reply was as follows:

"I understood that the matter of wages was satisfactorily adjusted last October, and we have no present intention of departing from the arrangement then made. I therefore see no object in the conference which you suggest, even if that method of procedure were desirable, which seems very doubtful."

February 26, 1901, Mr. Mitchell sent a letter to Mr. Olyphant, in which he stated that his letter was "for the purpose of inviting your company to be represented at a joint conference of mine workers, which has been called to meet at Hazleton, Pa., on March 15."

Mr. Olyphant declined to join in the conference and closed his communication as follows:

"So far as concerns conferences with its own employes in any branch of its service, regarding questions of mutual concern, I may again say that the officers of this company are at all times ready."

In April, 1901, the operators proposed to continue the advanced rate of wages until April, 1902. On February 14, 1902, the United Mine Workers of America invited the representatives of the railroads and coal companies operating in the anthracite region of Pennsylvania, to a joint conference of operators and miners on March 12, at Scranton, Pa., the object of the conference to be the formulation of a wage scale for the year commencing April 1, 1902, and ending March 31, 1903. The presidents of the companies to whom this communication was sent replied, declining the conference.

On March 22, 1902, Mr. Mitchell sent a communication to Mr. George F. Baer, president of the Philadelphia and Reading Coal and Iron Company, who represented the operators, as follows:

"By direction of the Miners' Convention, I wish to ascertain if your company

will join other Anthracite coal companies in conference with a committee representing Anthracite workers, for the purpose of discussing and adjusting grievances which affect all companies and all employes alike? Please reply."

To which Mr. Baer replied as follows:

"Always willing to meet our employes to adjust any grievances."

The Anthracite Mine Workers who were members of the United Mine Workers of America, held a convention at Shamokin, Pa., which remained in session from March 18 to 24, 1902, during which resolutions were passed demanding an eight hour day, the weighing of coal, and a uniform scale, with notice that after April 1st the miners would work only three days a week until the operators should come to some agreement with them, and they appealed to the Civic Federation to assist them in securing their demands.

In response to an invitation from the Industrial Department of the Civic Federation, Mr. Mark A. Hanna, United States Senator from Ohio, and Chairman of the Federation, invited some of the coal operators, especially the presidents of the large companies, to meet the officers of the United Mine Workers and the Civic Federation, to discuss the subject of the mine workers' demands.

The conference was held in New York, where Mr. Thomas, of the Erie Company, submitted the following propositions, which were understood to be the basis of the conference:

First. The anthracite companies do not undertake in the slightest manner to discriminate against members of the United Mine Workers of America, but they do insist that members of that organization shall not discriminate against nor decline to work with non-members of that organization.

Second. That there shall be no deterioration in the quantity or quality of the work and that there shall be no effort to restrict the individual exertions of men who, working by the ton or car, may, for reasons satisfactory to themselves and their employers, produce such a quantity of work as they may desire.

Third. By reason of the different conditions, varying not only with the districts but with the mines themselves, thus rendering absolutely impossible anything approaching uniform conditions, each mine must arrange either individually, or through its committees, with the superintendents or managers, any questions affecting wages or grievances.

After discussing at great length the questions relating to labor in the anthracite region, an adjournment was taken for thirty days. At the expiration of that time, another meeting was held with the Civic Federation, at which Mr. Mitchell and the District Presidents of the United Mine Workers, together with a large committee of miners, were present, when another free and full dis-

cussion took place without, however, any conclusion having been reached. At the suggestion of the Civic Federation, a committee composed of Mr. Mitchell and the Mine Workers' District Presidents and Messrs. Baer, Truesdale and Thomas, representing the operators, was appointed to further consider the points at issue, and to report to the Civic Federation at a date to be fixed by its chairman. This committee spent two days in discussion, but without result, and the Civic Federation was not again called together. Mr. Mitchell, however, convened his District Executive Committee, and on May 8 he sent the following communication to Messrs. Baer, Thomas, Truesdale and Olyphant:

"Scranton, Pa., May 8, 1902.

"Conscious of the disastrous effects upon mine workers, mine operators and the public in general, which would result from a long suspension of work in the Anthracite coal regions of Pennsylvania, and with the earnest desire and hope of avoiding the impending calamity, the representatives of the Anthracite Mine Workers have authorized us to submit the following propositions:

"First. Inasmuch as the mine operators have proposed to continue the present wage scale for one year, and inasmuch as the Anthracite Mine Workers have unanimously resolved to ask that an increase of 20 per cent. should be paid on present prices to all men performing contract work; that eight hours should constitute a day's labor for all persons employed by the hour, day or week, without any reduction in their present wage rate, and that coal should be weighed and paid for by weight wherever practicable, and inasmuch as in our recent conferences the Anthracite Mine Workers and operators have failed to agree upon any of the questions at issue, we propose that the industrial branch of the National Civic Federation select a committee of five persons to arbitrate and decide all or any of the questions in dispute, the award of such board of arbitration to be binding upon both parties, and effective for a period of one year.

"Second. Should the above proposition be unacceptable to you, we propose that a committee composed of Archbishop Ireland, Bishop Potter and one other person whom these two may select, be authorized to make an investigation into the wages and conditions of employment existing in the Anthracite field, and if they decide that the average annual wages received by Anthracite mine workers are sufficient to enable them to live, maintain and educate their families in a manner conformable to established American standards and consistent with American citizenship, we agree to withdraw our claims for higher wages and more equitable conditions of employment, providing that the Anthracite mine operators agree to comply with any recommendations the above committee may make affecting the earnings and conditions of labor of their employes."

Each of the four gentlemen to whom the above was addressed, replied as follows:

"May 8, 1902.

"John Mitchell:

"Not only from our standpoint, but from yours as well, the matter has had such full and careful consideration in all its features at our several interviews last week, as leaves little to be discussed. In addition, my letter of February

20th cannot fail to make it clear to you, as it is to us, that the subject cannot be practically handled in the manner suggested by your communication.

"E. B. THOMAS."

"May 8, 1902.

"John Mitchell:

"Your message of this date is received. You fail to state in it that the notices posted by this company not only agree to continue paying the 10 per cent. increase granted our mine employes in 1900 until April 1, 1903, and thereafter, subject to sixty days' notice, but it also states that our mining superintendent will take up and adjust any grievances with our employes.

"The reasons why we cannot grant your demand have been most fully explained in our recent conferences, and in my letter to you of February 18th last. In view of all these facts, I am sure you cannot expect us to concur in either of the propositions contained in your communication.

"W. H. TRUESDALE."

"Philadelphia, May 9, 1902.

"John Mitchell:

"I was out of town, hence the delay in answering your dispatch. By posted notices, the present rates of wages were continued until April 1, 1903, and thereafter, subject to sixty days' notice. Local differences to be adjusted as heretofore with our employes at the respective collieries.

"By written communications, by full discussion before the Civic Federation, by protracted personal conferences with yourself and the district presidents, we have fully informed you of our position. We gave you the figures showing cost of mining and marketing coal, and the sums realized therefrom in the markets, in the hope of convincing you that it was absolutely impracticable to increase wages.

"To your suggestion that the price of coal should be increased to the public, our answer was that this was not only undesirable, but in view of the sharp competition of bituminous coal, it was impossible.

"We offered to permit you, or your experts to examine our books to verify our statements.

"Anthracite mining is a business, and not a religious, sentimental, or academic proposition.

"The laws organizing the companies I represent, in express terms impose the business management on the president and directors. I could not if I would delegate this business management even to so highly a respectable body as the Civic Federation, nor can I call to my aid as experts in the mixed problem of business and philanthropy, the eminent prelates you have named.

"GEORGE F. BAER."

"New York, May 8, 1902.

"John Mitchell, Esq.,

"President United Mine Workers of America, Scranton, Pa.:

"Your telegram is received. The concessions made by the mine operators in your last strike, added to the wages of the mine workers \$6,000,000 or more per

annum. You now propose changes adding a charge of many millions more, and suggest that you will make a further demand a year hence.

"The public will not meet such advances by submitting to an increase in the price of coal, and the operators cannot meet them without such aid. I must, therefore, decline your proposition.

"R. M. OLYPHANT."

These various preliminary discussions having failed to accomplish any result looking to the peaceful settlement of the difficulty, the executive committee of the Mine Workers decided to order a temporary strike, and to submit the question as to whether it should be continued or not to a general convention. The order of the Executive Committee was as follows:

"To the United Mine Workers of the Anthracite Region of Pennsylvania:

"The Executive Committee of the Anthracite Mine Workers which was delegated by the Shamokin Convention to represent you in the negotiations with the mine operators and railroad presidents, to obtain if possible shorter hours and better conditions of employment, after exhausting all feasible conciliatory and honorable means at its command, and after failing to secure any concessions of a tangible nature, and while under the resolutions adopted by the Shamokin Convention, authority was vested in the Executive Committee, should it fail in the negotiations, to inaugurate a strike at whatever time it decided, in its judgment, held out the greatest prospect of success. The members of the committee after three days' serious deliberation, feel that in justice to themselves and the Anthracite Mine Workers and those dependent upon them, before a joint strike is inaugurated, the question should be further considered by a delegate convention, in which representatives from the local unions shall be fully instructed by their constituents, and be prepared to vote either in favor of or in opposition to a complete cessation of work.

"In the meantime, all persons employed in or about the collieries, strippings, washeries and breakers are instructed to temporarily abstain from work, commencing Monday, May 12, 1902, and continuing thereafter until a final decision shall have been reached by a delegate convention, which will convene at Hazleton on Wednesday, May 14th.

"The basis of representation in the convention shall be one vote for each 100 miners, and one vote for each additional 100 members or majority thereof.

"The instructions for all men to suspend work on May 12th do not include firemen, engineers, pump-runners or other laborers who are necessary to preserve the property of the operators."

Under this order, work was suspended on May 12, and on the 15th the convention having assembled, it voted to continue the strike.

The total number of votes cast was 811; the number for the strike was 461 and the number against it 350, so that the majority in favor of the strike was 111.

When the strike was inaugurated, the engineers, firemen and pumpmen were not involved, but at a meeting of the three Anthracite Executive Committees of the United Mine Workers, held in

Wilkes-Barre on May 21, it was decided to call out the above employes also, the order for which was as follows:

"Presidents of local unions and mine committees are hereby instructed to wait upon mine superintendents and notify them that on and after Monday, June 22d, all engineers, firemen and pumpmen are expected to work only eight hours per day and to receive present wages."

These demands not having been acceded to, on June 2 a majority of the above named employes ceased work, so that on the above date about 95 per cent. of the entire number of mine employes, which, as per the report of the State Bureau of Mines for 1901 was 147,651, stopped work and the great strike was on.

Of course, as was to be expected, trouble began shortly afterward, as some employes who were not affiliated with the United Mine Workers' Society persisted in working and were attacked by the strikers, the encounters finally becoming so frequent that the sheriffs of the counties in which the anthracite mines are located appealed to the Governor of the State, stating their inability to cope with the situation with the small force at their command, and on July 30 the Governor ordered part of the State Militia to the anthracite coal region.

This force, while it might have had a tendency to suppress disorder, accomplished practically nothing in the matter of bringing the strike to an end, or inducing the strikers to resume work.

On October 6, the Governor ordered the entire National Guard of the State, a force of some 9,000 men of all arms, to the anthracite region.

The general distress throughout that part of the country in which anthracite coal is used, finally became so great that the President of the United States, after having received numerous appeals from people in all stations of life, and recognizing the suffering that would ensue when cold weather should set in, finally resolved to make a strenuous endeavor to settle the difficulty, and in furtherance of this, he summoned to Washington the presidents of the various coal and railroad companies of the anthracite region, also Mr. John Mitchell, of the United Mine Workers and the District Presidents of that organization. The conference was held on October 3, at the temporary White House, and was attended by George F. Baer, President, Philadelphia and Reading Coal and Iron Company; E. B. Thomas, Chairman of Board, Erie Railway Company; Thomas P. Fowler, President, New York and Western Railway Company; David Wilcox, President, Delaware and Hudson Company; John Markle, representing the independent operators; John Mitchell, President, United Mine Workers, and Messrs. Thomas D. Nicholis, Thomas Duffy and John Fahy, District Presidents, United Mine Workers; United States Attorney General Knox, Carrol D.

Wright, United States Commissioner of Labor, and Private Secretary Cortelyou.

President Roosevelt expressed his hearty thanks to the gentlemen for their attendance, and stated that owing to his peculiar relations to the situation, he felt that he should make to them a very careful statement of his position and of his intentions in requesting them to meet.

The President's statement was as follows:

"I wish to call your attention to the fact that there are three parties affected by the situation in the anthracite trade—the operators, the miners and the general public. I speak for neither the operators nor the miners, but for the general public. The questions at issue, which led to the situation, affect immediately the parties concerned—the operators and the miners—but the situation itself vitally affects the public.

As long as there seemed to be a reasonable hope that these matters could be adjusted between the parties, it did not seem proper for me to intervene in any way. I disclaim any right or duty to intervene in this way, either on legal grounds or on any official relations that I bear to the situation, but the urgency and the terrible nature of the catastrophe impending over a large portion of our people in the shape of a winter fuel famine, impels me, after much anxious thought, to believe that my duty requires me to use whatever influence I personally can to bring to an end a situation which has become literally intolerable.

"I wish to emphasize the character of the situation, and to say that its gravity is such that I am constrained urgently to insist that each one of you realize the heavy burden of responsibility upon him. We are upon the threshold of winter, with an already existing coal famine, the future terrors of which, we can hardly yet appreciate.

"The evil possibilities are so far reaching, so appalling, that it seems to me that you are not only justified in sinking, but required to sink, for the time being, any tenacity as to your respective claims in the matter at issue between you. In my judgment, the situation imperatively requires that you meet on the common plan of the necessities of the public. With all the earnestness that is in me, I ask that there be an immediate resumption of operations in the coal mines, in some such way as will, without a day's unnecessary delay, meet the crying needs of the people.

"I do not invite a discussion of your respective claims and positions, but I appeal to your patriotism, to the spirit that sinks personal considerations and make individual sacrifices for the general good."

In response to the above appeal, the following answers were made

by the operators, through Mr. George F. Baer, and the United Mine Workers, through President John Mitchell and his colleagues:

"Washington, Oct. 3, 1902.

"Mr. President: At the conference this morning we, the accredited representatives of the Anthracite coal mine workers, were much impressed with the views you expressed and the dangers to the welfare of our country from a prolongation of the coal strike that you so clearly pointed out. Conscious of the responsibility resting upon us, conscious of our duty to society, conscious of our obligations to the one hundred and fifty thousand mine workers whom we have the honor to represent, we have after most careful consideration, and with the hope of relieving the situation and averting the sufferings and hardships which would inevitably follow in the wake of a coal famine, decided to propose a resumption of coal mining upon the lines hereinafter suggested.

"Before doing so, Mr. President, we desire to say that we are not prompted to suggest this course because of any doubts of the justice of our claims. In deferring to your wishes we are prompted by no fear on our part of our ability to continue the contest to a successful issue, thanks to the generous assistance rendered us by our fellow workers in this and other lands; thanks to a justice loving American public whose sympathies are always on the side of right, we are able to continue the struggle indefinitely. But, confident of our ability to demonstrate to any impartial tribunal the equity of our demands for higher wages and improved environment, we propose that the issues culminating in this strike shall be referred to you and a tribunal of your own selection and agree to accept your award on all or any of the questions involved. If you accept this responsibility and the representatives of the coal operators will signify their willingness to have your decision incorporated in an agreement for not less than one year nor more than five years, as may be mutually determined between themselves and the Anthracite coal mine workers, and will pay the scale of wages which you and the tribunal appointed by you shall award, we will immediately call a convention and recommend a resumption of work on the understanding that the wages which shall be paid are to go into effect from the day upon which work is resumed.

JOHN MITCHELL,

President, U. M. W. of A.

JOHN FAHY,

THOMAS DUFFY,

T. D. NICHOLLS,

District Presidents, U. M. W. of A."

The operators also addressed the President as follows:

"To the President of the United States:

"We understand your anxiety, as forcibly expressed in the statement you read to us this morning, to bring about 'an immediate resumption of operations in the coal mines in some such way as will without a day's unnecessary delay meet the crying needs of the people.' We infer that you desired us to consider the offer of Mr. Mitchell, verbally made this morning, expressing and speaking for the United Mine Workers, to go back to work if you would appoint a Commission to determine the question at issue.

"You distinctly say that you 'do not invite a discussion of your respective

claims and positions.' But we assume that a statement of what is going on in the coal regions will not be irrelevant. We represent the owners of coal mines in Pennsylvania. There are from fifteen to twenty thousand men at work mining and preparing coal. They are abused, assaulted, injured and maltreated by the United Mine Workers. They can work only under the protection of armed guards. Thousands of other workmen are deterred from working by intimidation, violence and crimes inaugurated by the United Mine Workers, over whom John Mitchell, whom you invited to meet you, is chief.

"I need not picture the daily crimes committed by the members of this organization. The 'domestic tranquility' which every constitution declares is the chief object of government, does not exist in the coal regions. There is a terrible reign of lawlessness and crime there. Only the lives and property of the members of the secret oath-bound order which declared that the locals should 'have full power to suspend operations at collieries' until the non-union men joined their order, are safe. Every effort is made to prevent the mining of coal, and when mined Mitchell's men dynamite bridges and tracks, mob trainmen, and by all manner of violence try to prevent its shipment to relieve the public.

"The Constitution of Pennsylvania guarantees protection to life and property; in express terms it declares the right of acquiring, possessing and defending property 'to be inalienable.'

"When riot and anarchy too great to be appeased by the civil power occur, the Governor of Pennsylvania is bound to call out the State troops to suppress it. He must fearlessly use the whole power of the State to protect life and property and to establish peace—not an armed truce, but the peace of the law which protects every man at work and going to and from work. He has sent troops to the coal regions. Gradually the power of the law is asserting itself. Unless encouraged by false hopes order will soon be restored, and then we can mine coal to meet the public wants. If the power of Pennsylvania is insufficient to re-establish the reign of law, the Constitution of the United States requires the President when requested by the Legislature and the Governor, 'to suppress domestic violence.' You see there is a lawful way to secure coal for the public.

"The duty of the hour is not to waste time negotiating with the fomenters of this anarchy and insolent defiance of law, but to do as was done in the war of the rebellion, restore the majesty of law, the only guardian of a free people, and to re-establish order and peace at any cost.

"The government is a contemptible failure if it can protect the lives and property and secure the comfort of the people only by compromising with the violators of law and the instigators of violence and crime.

"Just now it is more important to teach ignorant men, dwelling among us, misled and used as tools by citizens of other States, that at whatever cost and inconvenience to the public, Pennsylvania will use the whole power of government to protect, not only the man who wants to work, but his wife and children while he is at work, and to punish every man who, by instigation or by overt acts, attempts to deprive any man of his liberty to work.

Under this condition we decline to accept Mr. Mitchell's considerate offer to let our men work on terms he names. He has no right to come from Illinois to dictate terms on the acceptance of which anarchy and crime shall cease in Pennsylvania. He must stop his people from killing, maiming and abusing Pennsylvania citizens and from destroying property. He must stop it because it is unlawful and not because of any bargain with us.

"We will add to our offer 'to continue the wages existing at the time of the strike and to take up at each colliery and adjust any grievance,' this further condition—if the employers and employes at any particular colliery cannot reach a satisfactory adjustment of any alleged grievances it shall be referred

to the judges of the court of common pleas of the district in which the colliery is situated for final determination.

"GEORGE F. BAER,
"President Philadelphia and Reading Coal and Iron Company, Lehigh and
Wilkes-Barre Coal and Iron Company, and Temple Iron Company."

The presidents of the coal companies, after a conference, agreed to refer the matter to a commission to be appointed by the President of the United States, which should be empowered to thoroughly investigate the causes of the strike, and to recommend such changes in the hours of work and payment of wages as, in the opinion of the Commission, were just and equitable and that its award should be binding. They addressed the President as follows:

"We suggest a Commission be appointed by the President of the United States (if he is willing to perform that public service) to whom shall be referred all questions at issue between the respective companies and their own employes, whether they belong to a union or not, and the decision of that Commission shall be accepted by us.

"The Commission to be constituted as follows:

"1. An officer of the engineer corps of either the military or naval service of the United States.

"2. An expert mining engineer, experienced in the mining of coal and other minerals and not in any way connected with coal mining properties, either anthracite or bituminous.

"3. One of the judges of the United States courts of the eastern district of Pennsylvania.

"4. A man of prominence eminent as a sociologist.

"5. A man who by active participation in mining and selling coal is familiar with the physical and commercial features of the business.

"It being the understanding that immediately upon the constitution of such commission, in order that idleness and non-production may cease instantly, the miners will return to work, and cease all interference with or persecution of any non-union men who are working or shall hereafter work. The findings of this commission shall fix the date when the same shall be effective, and shall govern the conditions of employment between the respective companies and their own employes for a term of at least three years.

"GEORGE F. BAER,
"President Philadelphia and Reading Coal and Iron Company, Lehigh and
Wilkes-Barre Coal and Iron Company, and Temple Iron Company."

"E. B. THOMAS,
"Chairman, Pennsylvania Coal Company, Hillside Coal and Iron Company.

"W. H. TRUESDALE,
"President Delaware, Lackawanna and Western Railroad Company.

"T. P. FOWLER,
"President Scranton Coal Company, Elk Hill Coal and Iron Company.

"R. M. OLYPHANT,
"President Delaware and Hudson Company.

"ALFRED WALTER,
"President Lehigh Valley Coal Company."

Upon receipt of the suggestion of the anthracite presidents, President Roosevelt telegraphed to John Mitchell as follows:

"White House, Washington, Oct. 16, 1902.

"Mr. John Mitchell, President United Mine Workers of America, Wilkes-Barre, Penn'a:

"I have appointed as commissioners Brigadier General John M. Wilson, Mr. E. W. Parker, Judge George Gray, Mr. E. E. Clark, Mr. Thomas H. Watkins, and Bishop John L. Spalding, with Hon. Carroll D. Wright as recorder. These names are accepted by the operators, and I now most earnestly ask and urge that the miners likewise accept this commission. It is a matter of vital concern to all our people, and especially to those in our great cities who are least well off, that the mining of coal should be resumed without a day's unnecessary delay.

"THEODORE ROOSEVELT."

To which Mitchell replied:

"Wilkes-Barre, Pa., Oct. 16, 1902.

"Hon. Theodore Roosevelt, President of the United States, Washington, D. C.:

"Dear Sir: Replying thereto (to the above telegram), I beg to inform you that your recommendations were submitted to the members of the Executive Boards of Districts 1, 7 and 9, United Mine Workers of America, and they have unanimously agreed to call a delegate convention, to be held next Monday, and will recommend to the convention that all men now on strike return to the positions and working places formerly occupied by them, and submit to the commission appointed by you all questions at issue between the operators and mine workers of the Anthracite coal fields.

"JOHN MITCHELL,

"President United Mine Workers of America."

The subject of the reference of the controversy to the commission appointed by President Roosevelt was taken up by a convention of United Mine Workers, which assembled at Wilkes-Barre, and the result was communicated to him as follows:

"Wilkes-Barre, Pa., Oct. 21, 1902.

"Hon. Theodore Roosevelt, President of the United States, Washington, D. C.:

"Dear Sir: We, the representatives of the employes of the various coal companies engaged in operating mines in the Anthracite coal fields of Pennsylvania, in convention assembled, having under consideration your telegram of October 16, 1902, addressed to John Mitchell, president United Mine Workers of America, have decided to accept the proposition therein embodied and submit all the questions at issue between the operators and mine workers of the Anthracite coal region for adjustment to the commission which you have named. In pursuance of that decision we shall report for work on Thursday morning, October 23d, in the positions and working places occupied by us prior to the inauguration of the strike. We have authorized John Mitchell, president of the United Mine Workers of America, with such assistance as he may select, to represent us in all hearings before the commission.

"JOHN MITCHELL,

"Chairman of Convention.

"W. B. WILSON,

"Secretary of Convention."

It will thus be seen that the commission was authorized by two parties to the controversy to make, as to them, a binding award. The language of the proposition made by the operators is that "A commission be appointed by the President * * * * * to whom shall be referred all questions at issue between the respective companies and their own employes, whether they belong to a union or not, and the decision of that commission shall be accepted by us," and that of the acceptance by the representative convention of mine workers being that they "accept the proposition (for a commission as proposed by the operators) * * * * * and submit all the questions at issue between the operators and mine workers of the anthracite coal region for adjustment to the Commission which you have named."

The signatory operators and their employes represented in the Wilkes-Barre convention were, therefore, in substantial agreement as to the fact and the scope of the submission proposed.

Hon. Carroll D. Wright, who was appointed recorder of the Commission, was afterwards made a member of it by reason of his knowledge and experience in labor matters, he being the Chief of the United States Department of Labor.

The claims of the United Mine Workers of America were presented to the Commission by their President, John Mitchell, and were as follows:

"First. An increase of 20 per cent. upon the prices paid during the year 1901 to employes performing contract or piece work.

"This demand is made on account of the following reasons:

"(1.) The present rate of wages is much lower than the rate of wages paid in the bituminous coal fields for substantially similar work.

"(2.) The present rate of wages is lower than is paid in other occupations requiring equal skill and training.

"(3.) The average annual earnings in the anthracite coal fields are much less than the average annual earnings in the bituminous coal fields for substantially similar work.

"(4.) The average annual earnings in the anthracite coal fields are much less than the average annual earnings for occupations requiring equal skill and training.

"(5.) The rate of wages in the anthracite coal fields is insufficient to compensate the mine workers in view of the dangerous character of the occupation, in relation to accidents, the liability to serious and permanent disease, the high death rate and the short trade life incident to this employment.

"(6.) The annual earnings of the mine workers are insufficient to maintain the American standard of living.

"(7.) The increased cost of living has made it impossible to main-

tain a fair standard of life upon the basis of present wages and has not only prevented the mine workers from securing any benefit from increased prosperity, but has made their condition poorer on account of it.

"(8.) The wages of the anthracite mine workers are so low that their children are prematurely forced into the breakers and mills instead of being supported and educated upon the earnings of their parents.

"(9.) Wages are below the fair and just earnings of mine workers in this industry.

"Second. A reduction of 20 per cent. in hours of labor without any reduction of earnings for all employes paid by the hour, day or week.

"The second demand is similar to the first in that it is designed to increase the hourly rate of wages of mine workers, employed by the hour, day or week, and all the reasons applicable to the first demand are asked to be applied to the second without repetition.

"In addition thereto we submit the following:

"(10.) The ten-hour day is detrimental to the health, life, safety and well-being of the mine workers.

"(11.) Shorter hours improve the physical, mental and moral condition of the workers.

"(12.) Shorter hours increase the intensity and efficiency of labor.

"(13.) The tendency of National and State Governments, of organized trade and of production generally is toward shorter hours.

"(14.) A working day of eight hours is sufficiently long for the best interests of the workingmen and of the community.

"Third. The adoption of a system by which coal shall be weighed and paid for by weight wherever practicable, the minimum rate per ton to be 60 cents for a legal ton of 2,240 pounds, the differentials now existing at the various mines to be maintained.

"This demand is made on account of the following reasons:

"(1.) Measurement by the legal ton wherever practicable is the only honest and just system of measuring the earnings of the mine workers.

"(2.) When the operators sell or transport coal it is on the basis of a legal ton of 2,240 pounds.

"(3.) The excessive ton was originally intended to compensate the operator for the weight of the small sizes of coal which were then discarded, but which are now utilized and sold and, therefore, there is no present necessity for the use of any other than the legal ton.

"(4.) The adoption of this system would remove an incentive, both to the operator and the worker, to cheating and dishonesty.

and would allay jealousy among the miners and prevent unjust discrimination and favoritism.

"(5.) The change of the present system to the one asked for would prove a strong factor in allaying suspicion and discontent amongst the mine workers.

"Fourth. The incorporation in an agreement between the United Mine Workers of America and the anthracite coal companies of the wages which shall be paid and the conditions of employment which shall obtain, together with satisfactory methods for the adjustment of grievances which may arise from time to time, to the end that strikes and lockouts may be unnecessary.

"In support of this demand we submit the following reasons:

"(1.) The anthracite mine workers should not be compelled to make or sign individual agreements but should have the right to form such organization and choose such agents and officers as they desire to act collectively instead of individually whenever they deem that their best interests are subserved thereby.

"(2.) Agreements between employers and employes through workingmen's organizations are the ordinary method of regulating production and wages in the bituminous coal fields and in other large industries, and are beneficial, successful and in keeping with the spirit of the times.

"(3.) Unions of workingmen tend to better discipline of the men and to the improvement of their physical, moral and mental condition and to the preservation of friendly relation between employer and employe.

"(4.) Experience shows that the trade agreement is the only effective method by which it is possible to regulate questions arising between employers and employed in large industries, and that a trade agreement is the only possible way 'to establish the relations between employers and the wage workers in the anthracite fields on a just and permanent basis and as far as possible to do away with any causes for the recurrence of such difficulties as those you (the Anthracite Coal Strike Commission) have been called in to settle.'"

The Philadelphia and Reading Coal and Iron Company, replying to the demands of John Mitchell, representing certain anthracite mine workers, says:

First. That it owns thirty-seven collieries, situate in the counties of Schuylkill, Northumberland and Columbia, and that it did operate previous to the strike inaugurated by the United Mine Workers of America thirty-three collieries and four washeries, and that at that time it had twenty-six thousand eight hundred and twenty-nine employes in and about the mines.

Second. The first demand for "twenty per cent. increase upon the

price paid during the year 1901 to employes performing contract or piece work" is arbitrary, unreasonable and unjust.

This company denies that there is any such similarity between the mining of bituminous and of anthracite coal as to make wages paid in one a standard for the other. It avers that the bituminous coal fields extend over many States of the Union; that they differ widely in the physical and local trade conditions which largely control wages; that the work of mining anthracite coal is not substantially similar work to the mining of bituminous coal, and making all necessary allowances for differences in conditions, it denies that the rate of wages in the mines operated by this company is lower than that paid in the bituminous coal fields, whose coal output competes actively with the products of this company's mines.

Third. This company denies that the present rate of wages is lower than is paid in other occupations in the same locality and controlled by like conditions.

This company is not informed as to the average annual earnings in the bituminous coal fields, but it avers that nearly all of its former employes who, during the past five months worked in the bituminous mines, have returned to the anthracite regions, preferring to work in the anthracite mines. And it further avers that the annual earnings of the anthracite mine workers is largely reduced by their refusal to work as many days as it is customary to work in other occupations, and that by reason thereof this company is subjected to great loss, and the cost of producing coal is largely increased and the annual earnings of its employes diminished.

Fourth. This company denies that the average annual earnings of the men working full time in the anthracite coal field is less than the average annual earnings for occupations requiring equal skill and training.

Fifth. This company denies that "the rate of wages in the anthracite coal fields is insufficient to compensate the mine workers in view of the dangerous character of the occupation in relation to accidents, liability to serious and permanent disease, the high death rate and the short trade life incident to this employment."

Sixth. This company avers that whilst the sixth specification is too general and vague for specific answer thereto, that it is true that the anthracite coal regions (almost entirely dependent on the anthracite mining industry) are among the most prosperous in the United States; that employes of temperate and economic habits have saved money, and invested their savings in houses, building associations and other property, and that deposits in savings, State and National banks, aggregating millions of dollars, have been made by such employes; that the standard of living is equal to that

of the average American workmen; that the towns and cities are better than any mining towns in the bituminous coal fields of the United States.

This company denies that the alleged increased cost of living has made it impossible to maintain a fair standard of life upon the basis of present wages or from securing any benefit from increased prosperity, and that the condition of the workmen is poorer on account of it.

This company further denies that "the children of the anthracite mine workers are prematurely forced into the breakers and mills instead of being supported and educated upon the earnings of their parents because of low wages of such parents, or that such wages are below the fair and just earnings of mine workers in this industry." It avers that the State of Pennsylvania makes large annual appropriations to schools, and that the school districts levy local taxes for school purposes; that text books are supplied from public funds, and that the laws provide for compulsory attendance at public schools. In the county of Schuylkill this company paid for school taxes in the year 1901 \$80,000.

The local school boards are elected by the qualified voters of the townships, boroughs and cities. The means of education provided by the State, through its system of free schools and compulsory attendance, are not fully utilized, because of the failure of the local school boards to enforce compulsory attendance, but the wages paid are ample to insure a good common school education for all children in the coal regions desiring to attend school.

No boys are employed in and about the mines and breakers in violation of the statutes fixing the ages of employment.

In addition to provisions for education, ample hospitals for the care of the sick and injured are maintained in the anthracite coal regions.

This company avers that there is not anywhere else in the world a mining region where the workmen have so many comforts, facilities for education, general advantages and such profitable employment.

Seventh. This company denies that the second demand "for a reduction of twenty per cent. in hours of labor without any reduction of earnings for all employes by the hour, day or week" is either just or equitable, and avers that the reasons assigned in support of the demand are impracticable, in so far as they relate to the mining of anthracite coal. The certified miners, under present conditions, seldom work eight hours a day. The greater cost in the production and preparation of anthracite coal for market is not the cutting of the coal. Many employes are paid by the month, the pumping continues day and night, the machinery is

expensive and the cost of coal is largely conditioned on the collieries running full time. The output is entirely dependent on the quantity of coal a certified miner is willing to cut daily, and because of this it is seldom practicable to work the full breaker time.

In general, we deny that, in so far as they relate to anthracite mining, "that the ten hour day is detrimental to the health, life, safety and well being of the mine workers;" that "shorter hours improve the physical, mental and moral conditions of the workers;" that "shorter hours increase the intensity and efficiency of labor."

It admits that the tendency of National and State Governments and of labor organizations is towards shorter hours, but denies that a working day of less than ten hours will be of real advantage to the workmen engaged in and about the anthracite mines and collieries. In some exceptionally exhausting work, a day of ten hours is too long, but there is no exhausting labor which justifies a reduction of hours of work in the anthracite coal operations.

Any increase in wages will necessarily increase the price of coal to the public, restrict its use, and seriously affect the ability of the industries using it as fuel to compete with the industries using bituminous coal; it will bear heavily on the workmen and necessarily oppress the general public and injure the general business of the country. Because of the injury to the mines by the strike of the United Mine Workers of America, the cost of producing coal has been greatly increased and a temporary advance in price was made by this company, but it will be impracticable to continue such increase when mining operations become normal.

Eighth. This company, replying to the third demand, says: That it has had no disagreements with any of its employes about the weighing of coal. The quantity is usually determined by measurement; that when coal is mined by the ton it is customary and necessary to make allowances for slate and impurities. But this company does not mine by the ton. It denies that there is anything unreasonable or unfair in the method it has practiced in arriving at the measurement of the coal from its mines.

Ninth. This company, replying to the fourth demand, says: That the United Mine Workers of America are primarily a bituminous coal organization; that bituminous coal is a rival competitor in the market with anthracite coal; that ever since the advent of the United Mine Workers of America in the anthracite fields, the business conditions in the anthracite mines have become intolerable; the output of the mines has decreased, discipline has been destroyed, strikes have been of almost daily occurrence, men worked when and as they pleased, and the cost of mining has been greatly increased.

At the Shamokin Convention of the United Mine Workers of America, referred to in the statement, it was resolved: "That the United Mine Workers at any colliery, when the employes refused to become members of the organization and wear the button, the local governing such colliery, after using all persuasive measures to get such employes to join, and failing in such shall have full power to suspend operations at such collieries until such employes become members of the organization."

Subsequently, to wit, on May 12, the United Mine Workers of America inaugurated a strike, and by threats and intimidation, caused a suspension of work at all mines. Under date of May 21, they issued a formal official order requiring all pumpmen, firemen and engineers to desert their posts of duty, with intent to force submission to their unjust demands by the destruction of the mines. By threats and violence, they tried to prevent other men from taking the places of the firemen, pumpmen and engineers. The said United Mine Workers of America well knew that if this company did not succeed in keeping the pumps going the mines would be so greatly injured that it would be impossible to mine coal for many months after the strike ended, and that by reason thereof the workmen of the anthracite fields would be deprived of employment and the public be made to suffer untold hardships because of inability to procure fuel during the winter months.

In obedience to the strike and pump orders, and the power expressly given by its Shamokin Convention "to suspend operations at such collieries until such employes become members of the organization"—all manner of force and violence was used to prevent pumping of the mines to save them from destruction, and to prevent non-union men from working. The situation is well described in the proclamation of the Governor of the State of Pennsylvania, to which we beg to refer as part of this answer.

This company avers that these acts of intimidation, of injury to persons and property, and disturbance of the public peace, were contrary to the law of the land.

This company, further answering, avers that the jurisdiction of this Commission is limited to the conditions named in the statement of the coal company presidents, by virtue of which the Commission was appointed, and that by express terms, as well as by necessary implication, the investigation is confined to matters affecting its employes, and excludes the United Mine Workers of America from any part or recognition in the proceedings, recommendations or decisions of this Commission.

Further answering, it says that if when a labor organization, limited to workers in anthracite mines, is created which shall obey the laws of the land, respect the right of every man to work

whether he belongs to a union or not, and shall honestly co-operate with the employers in securing good work, efficiency, fair production and necessary discipline, trade agreements may become practicable.

And, further answering, the company says that it does not and will not discriminate against workmen belonging to the United Mine Workers of America, or any other labor organization, so long as they perform satisfactory work, and behave as law abiding people should, but that the company will at all times employ any person it sees fit, and will not permit any labor organization to limit the right of employment to the members of its organization.

Respectfully submitted,

GEORGE F. BAER,
President.

The Commission commenced its labors in Scranton, where the United Mine Workers' side of the case was heard, and afterwards adjourned to Philadelphia, where the operators' and the non-union men's testimony was heard, and after an almost continuous session, which lasted nearly three months, it adjourned to prepare its report, which was finally submitted to the President on March 21.

Following is the Commission's own summary of the awards made:

I. That an increase of 10 per cent. over and above the rates paid in the month of April, 1902, be paid to all contract miners for cutting coal, yardage and other work for which standard rates or allowances existed at that time, from and after November 1, 1902, and during the life of this award. The amount of increase under the award due for work done between November 1, 1902, and April 1, 1903, to be paid on or before June 1, 1903.

II. That engineers who are employed in hoisting water shall have an increase of 10 per cent. on their earnings between November 1, 1902, and April 1, 1903, to be paid on or before June 1, 1903, and from and after April 1, 1903, and during the life of the award, they shall have eight-hour shifts, with the same pay which was effective in April, 1902, and where they are now working eight-hour shifts the eight-hour shifts shall be continued, and these engineers shall have an increase of 10 per cent. on the wages which were effective in the several positions in April, 1902.

Hoisting engineers and other engineers and pumpmen other than those employed in hoisting water, who are employed in positions which are manned continuously, shall have an increase of 10 per cent. on their earnings between November 1, 1902, and April 1, 1903, to be paid on or before June 1, 1903, and from and after April 1, 1903, and during the life of the award, they shall have an increase of 5 per cent. on the rate of wages which were effective in the several positions in April, 1902;

and, in addition, they shall be relieved from duty on Sundays, without loss of pay, by a man provided by the employer to relieve them during the hours of the day shift.

That firemen shall have an increase of 10 per cent. on their earnings between November 1, 1902, and April 1, 1903, to be paid on or before June 1, 1903, and from and after April 1, 1903, and during the life of the award, they shall have eight-hour shifts, with the same wages per day, week, or month as were paid in each position in April, 1902.

All company men other than those for whom the commission makes special awards shall be paid an increase of 10 per cent. on their earnings between November 1, 1902, and April 1, 1903, to be paid on or before June 1, 1903, and from and after April 1, 1903, and during the life of this award they shall be paid on the basis of a nine-hour day, receiving therefor the same wages as were paid in April, 1902, for ten hour day. Overtime in excess of nine hours in any day to be paid at a proportional rate per hour.

III. During the life of this award the present methods of payment for coal mined shall be adhered to unless changed by mutual agreement.

In all the above awards it is provided that allowances like those made shall be paid to the legal representatives of such employes as may have died since November 1, 1902.

IV. Any difficulty or disagreement arising under this award, either as to its interpretation or application, or in any way growing out of the relations of the employers and employed, which cannot be settled or adjusted by consultation between the superintendent or manager of the mine or mines, and the miner or miners directly interested, or is of a scope too large to be settled or adjusted, shall be referred to a permanent joint committee, to be called a board of conciliation, to consist of six persons, appointed as hereinafter provided. That is to say, if there shall be a division of the whole region into three districts, in each of which there shall exist an organization representing a majority of the mine workers of such district, one of said board of conciliation shall be appointed by each of said organizations and three other persons shall be appointed by the operators, the operators in each of said districts appointing one person.

The board of conciliation thus constituted shall take up and consider any question referred to it as aforesaid, hearing both parties to the controversy, and such evidence as may be laid before it by either party; and any award made by a majority of such board of conciliation shall be final and binding on all parties. If, however, the said board is unable to decide any question submitted, or point related thereto, that question or point shall be referred

to an umpire, to be appointed, at the request of said board, by one of the circuit judges of the Third Judicial Circuit of the United States, whose decision shall be final and binding in the premises.

The membership of said board shall at all times be kept complete, either the operators' or miners' organizations having the right, at any time when a controversy is not pending, to change their representation thereon.

At all hearings before said board the parties may be represented by such person or persons as they may respectively select.

No suspension of work shall take place, by lockout or strike, pending the adjudication of any matter so taken up for adjustment.

V. Whenever requested by a majority of the contract miners of any colliery, check weighmen or check-docking bosses or both shall be employed. The wages of said check weighmen and check-docking bosses shall be fixed, collected and paid by the miners in such a manner as the said miners shall by a majority vote elect, and when requested by a majority of said miners the operators shall pay the wages fixed for check weighmen and check-docking bosses out of deductions made proportionate from the earnings of the said miners, on such basis as the majority of said miners shall determine.

VI. Mine cars shall be distributed among miners who are at work as uniformly and as equitably as possible, and there shall be no concerted effort on the part of the miners or mine workers of any colliery or collieries to limit the output of the mines or to detract from the quality of the work performed, unless such limitation of output be in conformity to an agreement between an operator or operators and an organization representing a majority of said miners in his or their employ.

VII. In all cases where miners are paid by the car the increase awarded to the contract miners is based upon the cars in sizes, the topping required, and the rates paid per car which were in force on April 1, 1902. Any increase in the size of car or in the topping required shall be accompanied by a proportionate increase in the rate paid per car.

VIII. The following sliding scale of wages shall become effective April 1, 1903, and shall affect all miners and mine workers included in the awards of the commission. The wages fixed in the awards shall be the basis of and the minimum under the sliding scale:

For each increase of five cents in the average price of white ash coal of sizes above pea coal, sold at or near New York, between Perth Amboy and Edgewater, and reported to the Bureau of Anthracite Coal Statistics above \$4.50 per ton f. o. b., the employes shall have an increase of 1 per cent. in their compensation, which shall continue until a change in the average price of said coal

works a reduction or an increase in said additional compensation hereunder; but the rate of compensation shall in no case be less than that fixed in the award. That is, when the price of said coal reaches \$4.55 per ton, the compensation will be increased 1 per cent., to continue until the price falls below \$4.55 per ton, when the 1 per cent. increase will cease, or until the price reaches \$4.60 per ton, when an additional 1 per cent. will be added, and so on.

These average prices shall be computed monthly by an accountant or commissioner, named by one of the circuit judges of the Third Judicial Circuit of the United States, and paid by the coal operators such compensation as the appointing judge may fix, which compensation shall be distributed among the operators in proportion to the tonnage of each mine.

In order that the basis may be laid for the successful working of the sliding scale provided herein, it is also adjudged and awarded:

That all coal operating companies file at once with the United State Commissioner of Labor a certified statement of the rates of compensation paid in each occupation known in their companies, as they existed April 1, 1902.

IX. No person shall be refused employment or in any way discriminated against on account of membership or non-membership in any labor organization, and there shall be no discrimination against or interference with any employe who is not a member of any labor organization by members of such organizations.

X. All contract miners shall be required to file within a reasonable time before each pay day a statement of the amount of money due from them to their laborers, and such sum shall be deducted from the amount due the contract miner and paid directly to each laborer by the company. All employes when paid shall be furnished with an itemized statement of account.

XI. The awards herein made shall continue in force until March 31, 1906, and any employe, or group of employes, violating any of the provisions thereof shall be subject to reasonable discipline by the employer; and, further, that the violation of any provision of these awards, either by employer or employe, shall not invalidate any of the provisions thereof.

Too much commendation can hardly be given to President Roosevelt for his timely interference in the controversy, as by it much suffering was saved the public, and work was resumed much earlier than it otherwise would have been. There is not another instance on record of the ruler of a nation offering his services in the settlement of a labor trouble, and it is to be hoped that some other and better way will be found in the future for settling labor troubles than the costly and senseless one of strikes.

A computation of the losses of the operators and em-

ployes, as made by the Strike Commission shows them to be approximately as follows :

Mine operators lost,	\$46,100,000
Employes lost wages,	25,000,000
Transportation companies lost,	28,000,000
<hr/>	
Total,	\$99,100,000

Another item of expense not included in this, is that of the State of Pennsylvania for the pay and maintenance of troops called out to preserve order, which amounted to, approximately, \$1,000,000.

BITUMINOUS

Ventilation of Bituminous Mines

In the First District the minimum quantity of air in non-gaseous mines was 135 cubic feet per minute for each employe inside, and the maximum in gaseous mines was 1,000 cubic feet; the average was 488 cubic feet.

In the Second District, the minimum quantity of air in non-gaseous mines was 112 cubic feet for each employe inside; the maximum in gaseous mines was 1,219 cubic feet; the average was 340 cubic feet.

In the Third District the minimum quantity of air in non-gaseous mines was 100 cubic feet for each employe inside, and the maximum for gaseous mines was 1,545 cubic feet; the average was 299 cubic feet for each person employed inside.

In the Fourth District the minimum quantity of air in non-gaseous mines was 106 cubic feet for each employe inside; the maximum in gaseous mines was 902 cubic feet and the average was 342 cubic feet.

In the Fifth District the minimum quantity of air in non-gaseous mines was 115 cubic feet for each employe inside; the maximum in gaseous mines was 1,237 cubic feet, and the average was 538 cubic feet.

In the Sixth District the minimum for non-gaseous mines was 106 cubic feet for each employe inside; the maximum for gaseous mines was 530 cubic feet, and the average was 244 cubic feet.

In the Seventh District the minimum for non-gaseous mines was 125 cubic feet; the maximum for gaseous mines was 617 cubic feet; the average was 283 cubic feet.

In the Eighth District the minimum for non-gaseous mines was

80 cubic feet for each employe inside; the maximum for gaseous mines was 555 cubic feet; the average was 280 cubic feet.

In the Ninth District the minimum quantity of air in non-gaseous mines was 44 cubic feet for each employe inside; the maximum for gaseous mines was 550 cubic feet; the average was 226 cubic feet.

In the Tenth District the minimum quantity of air in non-gaseous mines was 75 cubic feet for each employe inside; the maximum in gaseous mines was 550 cubic feet; the average was 219 cubic feet.

In the Eleventh District the minimum in non-gaseous mines for each employe inside was 91 cubic feet; the maximum in gaseous mines was 378 cubic feet; the average was 244 cubic feet.

In the Twelfth District the minimum for non-gaseous mines was 121 cubic feet for each employe inside; the maximum in gaseous mines was 568 cubic feet; the average was 274 cubic feet.

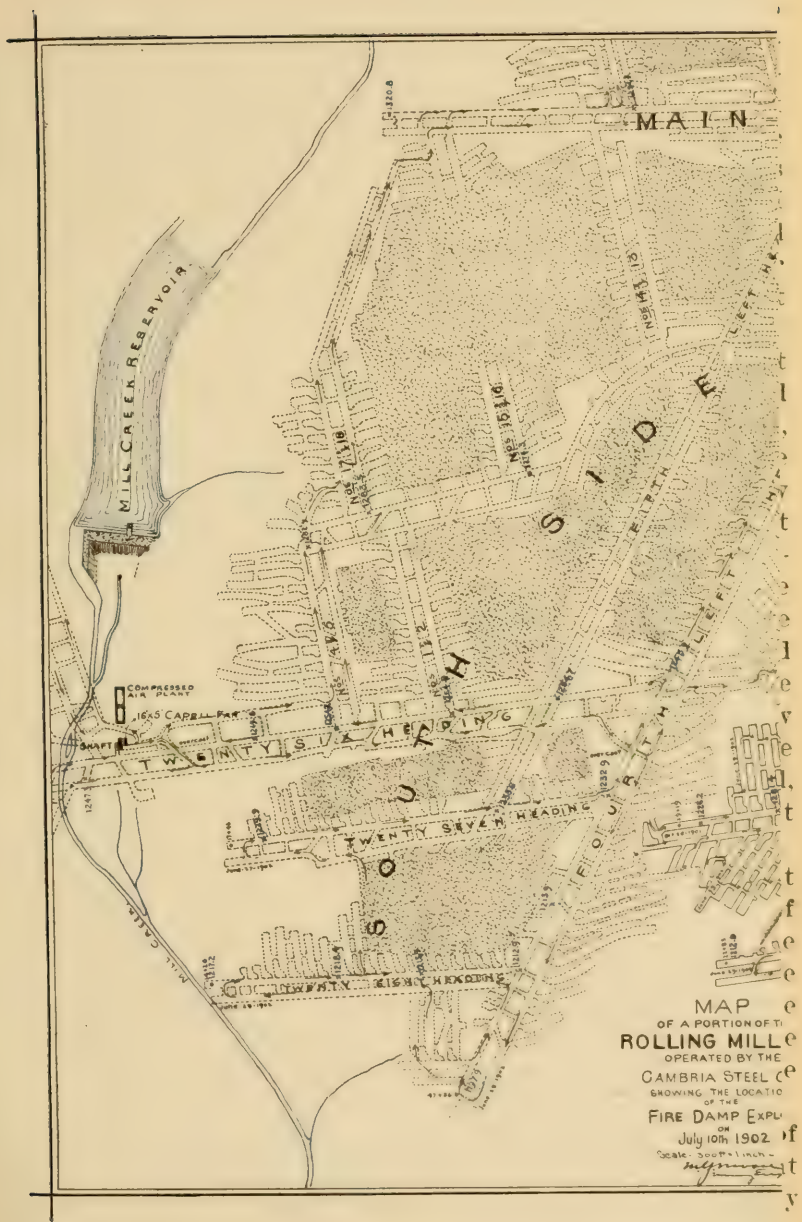
The returns from all the districts show that the average quantity of air per minute for each employe inside was about 300 cubic feet.

The Bituminous Mine Law provides that there shall be a minimum of 100 cubic feet of air per minute provided for each inside employe in non-gaseous mines. It will be seen, however, that the minimum quantity furnished in some of the bituminous districts was below this quantity, and in one district it was less than half. This defect the Inspector, should have remedied at once.

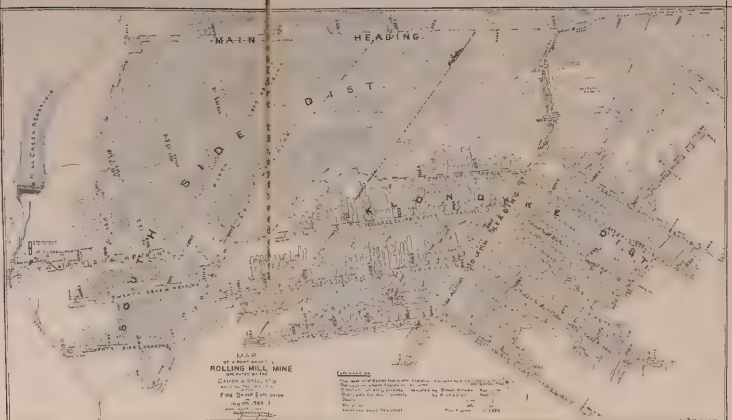
The law should be so amended that the minimum quantity of air per each inside employe would not be less than 150 cubic feet per minute in non-gaseous mines, and 250 cubic feet in gaseous ones.

THE GREAT CATASTROPHE AT THE ROLLING MILL MINE, JOHNSTOWN, PA., BY AN EXPLOSION OF GAS WHICH CAUSED THE LOSS OF 112 LIVES.

I spent the night of July 9 at Altoona, a few miles east of Johnstown, and on the morning of the 10th started for Atlantic City, reaching there in the evening. While on the boardwalk about 10 P. M., I heard the newsboys crying out "Night extra. Great explosion at Johnstown. 200 or 300 lives lost." I bought a paper and saw by the head lines that a terrible disaster had occurred at the Rolling Mill Mine, Johnstown. I gave the report very little credence, as I could not conceive how anything so serious could have happened at this mine, which was one of the safest and best conducted in the State. Yet I became very uneasy, as I concluded that



MAP
 OF A PORTION OF THE
 ROLLING MILLS
 OPERATED BY THE
 CAMBRIA STEEL CO.
 SHOWING THE LOCATION
 OF THE
 FIRE DAMP EXPL.
 July 10th 1902 of
 GEORGE DUFFELING



something had happened, and that possibly a "cave in" had occurred, causing the fire damp, which I knew existed to some extent above the falls in one part of the mine, to be driven on the men working with naked lights, and that perhaps a few might have been seriously or possibly fatally burned. In this state of uncertainty I went to bed and arose early the next morning in order to get the Philadelphia papers, and to my dismay the morning papers more than verified what the papers of the previous night had published. I took the first train for Philadelphia, and by hiring a carriage at the ferry was enabled to arrive in time to take the train which was due at Johnstown a little after 4 P. M. While on the train I received a telegram from Governor Stone, requesting that I should repair to Johnstown at once. Later, I found that the Governor had telegraphed to my home, and was apprised by my wife that he could reach me at Atlantic City.

I reached Johnstown a little after 4 P. M. of the 11th, and at once saw by the excited crowd that some terrible calamity had occurred. The streets were filled with anxious and excited people, while in the street opposite the Rolling Mill Mine and at the entrance where the dead bodies were laid out they were nearly impassable. I mingled unknown with the sorrowful crowd that was viewing the dead bodies which were laid out in rows waiting to be identified by relatives and friends. Indeed, the scene was heart rending. I noticed that the great majority of the people viewing the bodies were people who did not speak one word that I could understand, but their grief touched my heart. While mingling unknown among these thousands of people, I asked many questions, but soon found that no person among them knew how the accident occurred. While passing to and fro in this excited crowd, I did not hear a word of censure on the company's management, but often heard it remarked that the mine was considered a safe one.

About 7 P. M., the Inspector of the district, Mr. Evans, came out of the mine and for the first time I had an intelligent version of the disaster and the approximate number of lives lost, and he also gave me his version of the cause of the explosion so far as he had gathered from observation, as he had been continually in the mine from Thursday evening until Friday evening, helping to locate and rescue the living, and after that locating and taking out the dead bodies.

After discussing the condition of the mine and the number of dead bodies supposed to be in it, I arrived at the conclusion that more help was needed, as Evans had overtaxed himself, and really was not in condition to re-enter the mine that night, so I persuaded him to go to bed so that he would be able to go inside on Saturday again. Later, I telegraphed Inspectors C. B. Ross, Greensburg, I. G. Roby, Uniontown, and Joseph Williams, Altoona,

requesting them to report at Johnstown at once and to be equipped so as to enter the mine. These Inspectors reached Johnstown on Saturday evening, and I at once called them and Inspector Evans together for consultation. Mr. Evans was emphatic in his statement that all the bodies had been recovered and taken out, and that being the case, I decided that it would be best not to enter the mine on Saturday night, so that the mine officials might have a breathing spell, and some necessary repairs might be made in the affected district, such as temporary closing of holes, bratticing and replacing some doors that had been blown down by the explosion.

Early on Sunday morning, the 13th, the three Mine Inspectors, with J. T. Evans, the Inspector of the District, entered the mine. They were piloted by Fire Bosses Griffith Powell and Benjamin Hartell, Dr. C. E. Hannan, Assistant Mine Foreman Charles Crocker and others.

The Inspectors spent the whole day in the mine, but most of the time was pent in the "Klondike" section, and especially in the section that was mostly affected by the explosion. I met them at the mine office, where we held a long conference. Afterwards, I asked them to send me a brief report of the exploration, which is as follows:

"Mr. Jas. E. Roderick, Chief of the Bureau of Mines:

"Dear Sir: We, the undersigned, have this day made a thorough and careful examination of the Rolling Mill Mine of the Cambria Steel Company, where the recent explosion occurred, known as the Klondike district, and after a thorough search, we failed to find a trace of gas at the face of the workings so examined or even on the 'Falls.' Therefore we are of the opinion that operations can be commenced to-morrow except in the Klondike district. This district will need some repairs before operations can be resumed. Later on we will make a full report to you of our investigation.

"Yours truly,

"J. T. EVANS, Inspector Sixth District.

"I. G. ROBY, Inspector Fifth District.

"C. B. ROSS, Inspector Second District.

"JOS. WILLIAMS, Inspector Tenth District."

Later, I sent the following letter:

"Johnstown, Pa., 7. P. M., July 13, 1902.

"Mr. Charles Price, General Manager:

"Dear Sir: To-day Inspectors Evans, Roby, Ross and Williams made a thorough examination of the locality of the recent explosion in the Rolling Mill Mine of the Cambria Steel Company, and have unanimously reported that they did not find a trace of fire-damp even on the 'falls,' and that they consider the mine in a safe condition.

"Therefore, you are at liberty to resume operations in said mine (except in the Klondike section) at your convenience. When the repairs are completed,

please notify the district Inspector, who will make another inspection before operations are resumed in that part.

"Yours truly,

"JAMES E. RODERICK,
"Chief of Bureau of Mines."

Later in the evening, Mr. Price sent me the following letter:

"Johnstown, Pa., July 13th.

"Mr. James E. Roderick, Chief of Bureau of Mines:

"Dear Sir: I am just in receipt of your notification of the 13th instant advising of the favorable report of Messrs. Evans, Roby, Ross and Williams, and conveying your authorization to the company's starting the Rolling Mill Mine to-morrow morning in all its parts but the Klondike section.

"This last to be again inspected by Mr. Evans after repairs are completed before being operated.

"Orders will be given in accordance with your communication.

"Yours truly,

"C. S. PRICE,
"General Manager Cambria Steel Company."

The Inspectors and myself were in conference again until late in the night, and as some points in their report were not quite clear, we again met on the day following and it was decided that the Inspectors should make another tour of examination in the morning, Tuesday the 16th.

The following is the full report of the four Inspectors, who spent two days in making as thorough an examination as possible in the limited time at their command:

Johnstown, Pa., July 23, 1902.

Mr. James E. Roderick, Chief of Bureau of Mines, Harrisburg, Pa.:

Dear Sir: In obedience to your instructions, we made a rigid and thorough examination of the Klondike section of the Rolling Mill mine, owned and operated by the Cambria Steel Company, Johnstown, Pa., where the recent terrible explosion occurred on the 10th day of July, 1902, at 11.30 A. M., said mine being located, or the entrance thereto, in Lower Yoder township, Cambria county, Pa., near the stone bridge on the main line of the Pennsylvania Railroad, this examination being made for the purpose of ascertaining the causes leading to said catastrophe. At 9.30 o'clock A. M., July 13, 1902, we met Charles H. Crocker, Assistant Superintendent, and Griff Powell, fire boss, two of the officials of the mine, and Dr. C. E. Hannan, a physician, and others, at the mine office of the mine, and after some preliminary arrangements, in company with the persons named, we entered the mine by way of river entrance near the stone bridge. We were conveyed from the main entrance in the haulage trip to the safety lamp station, near the entrance

to Klondike section. Here the party were all equipped with locked safety lamps and all persons who had in their possession matches, smokers' articles, etc., were required to deposit them with the person in charge of the safety lamp station. We measured the return air at the entrance to the Klondike section, and found 20,000 cubic feet of air per minute in circulation. We were then taken by an air motor to a siding near the entrance to No. 5 entry, right. On our way down the main Klondike entry we noticed numbers of dinner pails scattered here and there along the entry where their respective owners were overcome by the after-damp as they endeavored to escape. From the siding where we were landed by the air motor, we proceeded to No. 6 entry right; passing into this entry we turned into what is known as first long-wall room, which had been driven at ninety degrees, or at right angles to No. 6 entry right. We made an examination of Nos. 1, 2 and 4, long-wall rooms, and also of No. 1 room off No. 6 entry, right, and found that Nos. 2 and 4 long-wall rooms had been worked on the day of the explosion, from the fact that tools, dinner pails, coats and smokers' articles were found therein. We then returned to No. 6 entry and passed along the same to No. 7 room. On our way up this entry we observed that the compressed air pipe line was lying upon the road in some places, presumably the result of the force of the explosion. At the entrance to No. 7 room we consulted the mine map, after which we returned to No. 2 room. On reaching it, we found that miners had been at work therein when the explosion occurred, as coats, tools, a can of blasting powder and a miner's open lamp were found near the face of the room. We found that this room, No. 2, had been cut through to the rib fall on No. 5 entry, right, where gas was known to exist. The finding of the miner's open lamp filled with oil and cotton, ready for use, so near this fall, which, from inquiry, we learned contained fire damp since the first break or rib falls were made, seemed to indicate that this might be the point where the gas was ignited. Upon continuing our explorations, we found drilling tools in cut-through between Nos. 6 and 7 rooms off same entry where day men were blasting down roof, and as it was commonly reported that the explosion of gas might have occurred from the blasting, we made a very careful examination of the place, and found that the slate loosened by the last shot had been nearly all taken down, and we were further informed that two of the unfortunate victims were found with their tools beside them, and that the third was found just across the No. 7 room, which would naturally lead us to believe that they were not firing a shot at the time of the explosion, as it would naturally be supposed they would all be out of their place if they were about firing a shot. These facts would prove that

the men were at work taking down the loosened slate when the explosion of gas occurred.

Continuing our examination, we found in cut-through between Nos. 6 and 7 the first conclusive evidence of force from the explosion. Here we found that some posts had been blown out and other unmistakable evidence that the force was in the direction of the main Klondike entrance or from No. 7 room through the cut-through to No. 6 room. From this point, we continued until we reached No. 12 room, off No. 6 entry, right, and passed through this room to No. 5 entry, right, then turned to the right, passed down along No. 5 entry to cross cut from No. 5 to No. 4. Here we found a stone stopping blown out and the air pipe disconnected by the force of the explosion. The stopping was blown in the direction of No. 4. We then proceeded down No. 5 a short distance and turned into a room with a view of examining the gob or accessible parts of the gob fall. After passing into this room a short distance, some of the party went forward to make further examinations, while the rest remained at this point. The parties who went ahead soon returned, stating that they had discovered unmistakable evidence of where the force had come down off the fall. These parties then conducted us to their discovery by way of No. 5 entry and out along No. 12 room, where they had made the discovery, and there we found the evidence of the explosion as reported to us. The force of the explosion, after coming down off the fall through the cut-through from No. 11 to No. 12 rooms, divided itself naturally, part passing out to No. 5 entry, which blew out the stopping and disconnected the air line above mentioned. We followed the other lines of force which went or led toward No. 6 entry, right, until we reached the first cut-through to the left; passing through this cut-through, crossing rooms and ribs by way of cross cuts until we came back to No. 2 room off No. 6 entry.

Failing in our careful search and examination to find any evidence that would warrant a change in our former opinion as to the gas being ignited at the face of No. 2 room, where the miner's open lamp, before mentioned, was found, caused us to return to the face of this room for the purpose of making a more rigid and careful examination. On arriving at the face of this room, a close observation of the coal face on either side of the opening, before mentioned, which connected the fall on No. 5 entry, right, disclosed the fact that blasting had been done in close proximity to the fall. The bottom end of one blast, where a shot had been located, was plainly discernible and would not exceed a distance of more than four feet from the fall, but as the coal from this blast had been brought down and loaded, we were satisfied that the explosion did not occur from this blast. Further search revealed

another miner's open lamp, containing oil and cotton ready for use, The distance from where this lamp was picked up to the fall was 18 feet. This was the second lamp found in this room, and from their location when found we believe that both lamps were lighted and in use at the time the explosion occurred. If the lamps had not been in use, they would have been back along the rib or on the outside of the danger board, the latter place being the proper place as required by law.

After leaving the face of No. 2 room off No. 6 entry, right, we proceeded to No. 5 entry, right, for the purpose of making an examination of this entry, in order to make a complete circuit of the point where the explosion occurred. The first evidence of the force of the explosion near the entrance of this entry was found where a door, used in directing the air current, had been destroyed. Here the evidence was very plain that the destruction of this door caused the loss of many lives, because it allowed the deadly after-damp, which resulted from the explosion, to rush out in large volumes on the main Klondike entry through which the persons working in all entries right and left of the Klondike entry had to pass on their way out of the mine. At the entrances to Nos. 1, 2 and 3 rooms off No. 5 entry, right, the force of the explosion was plainly seen, as slate and other mine refuse which had been previously placed in the entrances to these rooms had been blown out upon the roadway. From here we passed on to No. 11 room, which adjoins No. 12, before mentioned, as the room in which the force of the explosion was found. An examination of room No. 11, which connects with the fall, was made, and here the first evidence of fire was discovered; small splinters on posts were burned to ashes. We then passed to No. 10 room, where evidence of fire was also discovered near the edge of the fall, but not so great as in No. 11. The other parts of the rooms, all of which connect with said fall, down to No. 3 room, were examined and no evidence of fire was discovered. The force of the explosion was scarcely discernible in any of these places, which proved conclusively that the main force of the explosion took an easterly and westerly course from the fall on No. 5 entry, right, and that the explosion occurred on the fall. A careful examination of this fall was made on the way but no explosive gas was found. We then returned from the mine.

On the 14th instant, a consultation was held at the Merchant's Hotel, Johnstown, Pa., and we decided to re-enter the mine on the morning of the 15th instant, and make further investigations. We entered the mine on the 15th instant about 9 o'clock A. M., and proceeded to the Klondike section, where we made an examination of Nos. 1, 2 and 4 long-wall rooms, also Nos. 1, 2, 3 and 4 rooms, off No. 6 entry, right. In No. 1 long-wall room a place was found

driven to the right which connected with No. 2 room, off No. 5 entry, right. Upon entering this room we found coal dust coked to the thickness of one-half inch in many places on the sides of the last cut-through into said fall. A watch was found in a coat near face of No. 2 long-wall room. Explosive gas was found on No. 5 entry, right, rib fall at face of No. 4 room long-wall and Nos. 2 and 3 rooms. The face of all places on No. 6 entry, right, near the fall on No. 5 entry right where the explosion occurred, was carefully examined for the purpose of ascertaining, if possible, whether or not a blast could have been placed in the coal and in exploding failed to bring down the coal, but instead blew through to the fall, the flame from which would certainly ignite the gas. No blasts of this kind were discovered. We proceeded to the cut-through leading from the fall in No. 11 room to No. 12 room, off 5 entry, right, the place where the first unmistakable evidence of the force of the explosion as it came down from the fall had been discovered by us on July 13. We found, on the fall, explosive gas. From this point we proceeded on our way out of the mine. You will notice that we found no gas on the 13th instant, but did find it, as stated above, on the 15th, which shows that gas was accumulating again on said fall.

And now, July 23, 1902, after having made the said examination, and after due consultation and deliberation, we are agreed in the opinion that the explosion occurred on rib fall on No. 5 entry, right, in what is known as the Klondike section of the Rolling Mill mine. And further, we are of the opinion that the gas which caused said explosion, was ignited at the face of No. 2 room off 6 entry, right, by coming in contact with one or both of the miner's open lamps, which were found by us at the face of said room. And we further find that under the facts and law that none but locked safety lamps should have been used in that part of the mine where the explosion occurred.

Respectfully yours,

J. T. EVANS,

Inspector, Sixth Bituminous District.

C. B. ROSS,

Inspector, Second Bituminous District.

I. G. ROBY,

Inspector, Fifth Bituminous District.

JOSEPH WILLIAMS,

Inspector, Tenth Bituminous District.

A synopsis of the above report was forwarded by me to the Governor.

After completing our labors at Johnstown, the Inspectors before named and myself proceeded to Pittsburg to attend a general

meeting of the Bituminous Inspectors, all of whom were present. There was a lengthy discussion on matters pertaining to the safety of persons employed in coal mines, but more especially in gaseous ones. We were in session for two days and the following circular letter is the fruit of our deliberations, a copy of which was sent by the several Inspectors to each mine foreman and superintendent in their respective districts:

CIRCULAR LETTER.

Dear Sir: Knowing that explosive gas or other noxious gases have been generated in the _____ Mine, of which you are the _____, and realizing the danger in connection therewith, I desire to call your attention to some of the most important provisions of the Bituminous Mining Law, and to urge upon you the necessity of a strict compliance therewith in order to better safeguard the lives of the employes under your charge.

Therefore, I would respectfully call your attention to section 5, of article 5, of the above act, relative to the use of safety lamps in gaseous mines, which is as follows:

"All entries, tunnels, airways, traveling ways and other working places of a mine, where explosive gas is being generated in such quantities as can be detected by the ordinary safety lamp, and pillar workings and other working places where a sudden inflow of said explosive gas is likely to be encountered (by reason of the subsidence of the overlying strata or from any other causes) shall be worked exclusively with locked safety lamps."

From the wording of this part of the foregoing section, I am of the opinion that in order to insure greater safety to the employes of said mine, or mines, the exclusive use of locked safety lamps in any division of a mine which is ventilated by a separate air current or split where gas is being generated in sufficient quantities to be detected by the ordinary safety lamp, must be insisted upon, and especially should the proper mine official require the exclusive use of locked safety lamps where pillars are being extracted, when gas has been detected, or when it is likely to be encountered, and I would further recommend the use of locked safety lamps by employes while they are cutting through clay veins in solid workings, where a sudden inflow of gas is *likely to be encountered*, and *there should be no standing gas left in any part of a mine* where it will be a menace to life, if it be practicable to remove it.

When safety lamps are given to employes to be used in a mine, an official should make a thorough test of the employes, to ascertain their knowledge as to the use of the lamps, and should they not thoroughly understand how to use and care for them, they

should not be permitted to use them until they are fully instructed, and the official is satisfied that they thoroughly understand their use. The mine foreman shall instruct the official issuing the safety lamps to see that no open light, lamp, matches or smoker's articles are in possession of any person beyond the safety lamp station, and no person or persons (except such as are duly authorized by the mine foreman, and the name of such person or persons shall appear in the mine foreman's daily record book), shall be in possession of a key or other device for opening a safety lamp.

In my opinion, the mine foreman, or his assistants, should examine the workings and other places in gaseous mines frequently during the day, while mining or other work is being done.

Section 5, of article 5, relative to the use of electricity in mines, is as follows:

In all mines or parts of mines worked with locked safety lamps, the use of electric wires and electric currents is positively prohibited unless said wires, machinery and all other mechanical devices attached thereto and connected therewith, are constructed and protected in such a manner as to secure freedom from the emission of sparks or flame therefrom into the atmosphere of the mine."

Up to the present time there has been no device perfected, so far as is known to me, that will positively prevent the emission of sparks or flame from such electric wire or machinery; therefore, whenever they are placed in any such mine, or parts of such mine, *they are placed there in direct violation of said law*, and I respectfully request you to comply strictly with the provisions of the law.

Your attention is also called to section 4, of article 8, relative to the use of oil by the employes in your mine, which is as follows:

"Only a pure animal oil or a pure cottonseed oil, or oils, that shall be as free from smoke as pure animal or pure cottonseed oil is, shall be used for illuminating purposes in any bituminous mine."

I earnestly request that you see that only such quality of oil is used by your employes as is required by the above section of this act, and that you prohibit miners, machine runners and scrappers from using any other than the common-sized miner's lamp.

The above is submitted for your earnest consideration, and I trust that you will make every effort to comply with these recommendations and the provisions of the law quoted herein.

Please acknowledge receipt of this circular.

Yours respectfully,

Mine Inspector.

SYNOPSIS OF THE EVIDENCE AT THE INQUEST HELD JULY 23, 24 AND 25, 1902, AT JOHNSTOWN, ON THE BODIES OF THE VICTIMS OF THE EXPLOSION OF "FIRE-DAMP" IN THE ROLLING MILL MINE ON JULY 10, 1902, BY WHICH 112 PERSONS LOST THEIR LIVES.

Jacob Brush, a miner, testified as follows:

"Worked in the Rolling Mill mine; have worked in the Klondike section for six years; worked on night shift on July 9 and left the mine at 2.30 A. M. on the day of the explosion. Always worked with safety lamps, as we were instructed that gas was to be found on the face and that it was dangerous to work with open lamps. I do not know the name of the safety lamp we used.

"We were continually warned by the foreman to be very careful, but as an experienced miner, I knew how to make the test for gas."

In reply to the question as to whether he had ever found gas when making tests, he said that he never had in the place in which he then worked, but in another section he had found a little. He said he was a German, as were also the other men with whom he worked, and they were all experienced miners.

John Wilthowski, a miner, after having been sworn, testified that he worked with Jacob Brush, the former witness, and had worked for the Cambria Steel Company for seven years, the most of the time in the Klondike section of the Rolling Mill mine. Had worked on the night shift on the night before the explosion; safety lamps were used exclusively; they were kept locked and were received from the fire boss shanty by the men before they commenced work on each shift. Had never found gas where he worked, but there was a "danger mark" there to give notice that no person should enter without a safety lamp. He had made tests for gas in the same manner that the former witness, Brush, had illustrated, and he had been instructed by the bosses to make such tests and the orders were very strict in that regard. He had received notices of instruction in various languages posted at the mine entrance and in other places, and had read them. Had good air in his working place, so that after a shot the smoke would clear away in about two minutes. He said that they had fired three blasts on the night before the explosion; had extra lamps with which to fire the shots, but always tested for gas before firing. If a lamp became defective a report was made to the fire boss or foreman, and the lamp was taken to the shanty. He had never carried a pipe or matches into the mine.

Herman Schonsek, a miner, after having been sworn, testified as follows:

"I worked in the Rolling Mill mine for ten years and in the Klondike section about three years. I went away but returned, and at the time of the explosion had worked in that section of the mine about four months. Worked on the night before the explosion with Brush and Wilthowski, the former witnesses. We worked in what is known as the "Long wall" room; used safety lamps exclusively." He recognized the lamp shown as the kind he used. He said that he always tested for gas before firing a shot, and that the fire boss always opened the lamp with which to ignite the shot. In answer to the question as to whether he went to the fire boss whenever he wanted to blast coal, he replied that he did not, but that the fire boss left one lamp open for that purpose. He said that he had worked in mines for twenty years and knew all about gas; that there was no gas in the room in which he worked, as he had tried for it and would not have fired a shot had there been any gas.

In answer to the question as to whether he considered the Klondike section of the mine any more dangerous from gas than any other part of the mine, he said that they were all about the same, and that while there was some gas in the mine, he had never encountered it except in small quantities. He said that he had worked at mining in Germany and at several places in Pennsylvania, and that the mines in which he had worked in Westmoreland county were a great deal more gaseous than the Rolling Mill mine. In answer to the question as to how he would test for gas, he illustrated the method with a safety lamp. He said he never had worked where there was an explosion of gas.

Valentine Salla testified, through an interpreter, as follows:

He said that he had worked in the Rolling Mill mine for eighteen months and in the Klondike section one year; that he worked on the day of the explosion and was in the mine at work until an hour after it occurred, but knew nothing about it, only that he felt a rush of warm air, which extinguished his light. He then went to No. 4 room, fourth right heading, refilled and relighted his lamp and resumed his work of loading a car, when a fire boss came to him and asked him where the explosion was, and he replied that he did not know there had been an explosion. The fire boss then left, but in a few minutes the foreman came to him and told him to go home. He started, but soon came on some bodies of dead men, and some men who were alive lying beside the track, but in a few minutes he fell and arose and tried to walk, but fell

again and remembered nothing more until he was rescued and taken from the mine.

George Bogie sworn and testified as follows:

He said that he was a "gauger" in the Rolling Mill mine; was born in Hungary and was a Slav; that he had worked in the mine for ten years, and in the Klondike section for eight years, where he dug coal previous to his appointment as gauger. On the day of the explosion he had been in No. 6, right, about half an hour before the explosion occurred, but at the time of the occurrence was in the main heading, near the oil shanty, where there is a telephone, when he felt something like a strong wind and heard a strange sound and feared that something was wrong. About ten minutes afterwards, two men came up from the Klondike, who said there were men lying in it who could not rise; he then thought there had been an explosion and tried to get a safety lamp, but could not get into the fire boss' shanty, as it was locked, and he did not wish to use an open light.

In answer to a question as to whether he had ever seen gas in the sixth heading, he replied that he had. He said he had a wide experience in the mine and was well acquainted with the workmen; that the Klondike section was not any more dangerous than any other part of the mine, and if the miners had ever mentioned it as being dangerous, he would have heard of it. There were about twenty Hungarians working in the Klondike and about six English-speaking people.

W. H. Morris was sworn and testified as follows:

"I live in Johnstown; am a mine manager at Boswell, in this State, and also at Elk Lick, West Virginia. Prior to assuming my present position, I was superintendent for the Cambria Steel Company, and the Rolling Mill mine was under my supervision for more than ten years. There had always been gas in the mine, more particularly in the pillar work, and that was considered the only work which was really dangerous, as there never had been much trouble with advance work. The rule of the company was that no person should be employed at pillar work without a safety lamp, which rule was strictly observed. The duty of the fire boss is to examine each working place every morning before work is commenced, and if there was a double turn working he would make the examination between 3 and 4 o'clock A. M. and if any place was not examined the men were not permitted to go into it, but waited at the fire boss' shanty until the place was pronounced safe. If there was danger the men were notified personally, and a sign board was put up with 'GAS—DANGER,' written on it, and no person was

permitted to pass such sign. If there was a pillar to be taken out and gas was encountered, work was suspended until the place was in a safe condition, and the company was very careful to keep the surveys close and accurate. I was in the mine after the explosion, and saw the bodies of the men; the first that I saw were on the side track to the Klondike. I counted twenty-five bodies in that place and they had all been more or less severely burned. I thought that the gas was not at its highest explosive point; that there was a larger proportion of gas than air, or probably the reverse was the case. Judging from that map there, the area that the explosion covered reached from the room at the point where the explosion occurred to near the top of the sixth right heading, but I do not know whether the men we took from the top of that heading were burned or not. I think the others were burned by gas."

In answer to the question as to what course he pursued in cases where men were detected in using open light in disobedience of orders, he replied that only two such cases had occurred in the ten years of his superintendency, and the men were promptly discharged. He said that he had frequently received letters from the mining engineer, Mr. Marshall G. Moore. (The letters were produced.) He also said that Mr. Robinson was his assistant, and that he gave Mr. Robinson copies of all such letters and also wrote letters to the foremen and fire bosses.

In answer to the question of how he, as an expert mining man, considered the Rolling Mill, compared with other mines, he replied that he thought there was not a better conducted mine in the State, as the company never counted the cost nor spared any expense in making the mine safe; the crossings were all either of brick or steel and practically indestructible by explosions.

In answer to the question as to whether he had formulated any theory as to the cause of the explosion, he replied that he did not care to advance any opinion, but it was certain that the gas was ignited by some person. He said that during his incumbency there had been but one explosion of gas, which was caused by one of three men, who worked together in a heading and who had been miners all their lives, practically speaking, going over a danger mark and igniting the gas by which one of them lost his life.

Paul Schilling, after having been sworn, testified as follows:

"I am a German; have worked in the Rolling Mill mine nearly eleven years, and in the Klondike section five years; worked in No. 4, right, on the day of the explosion, and went out of the mine through No. 4, left (shows location on map). I was running a machine; there was no gas where I worked and there were no stop

marks or danger signals. I know what danger signals mean and have seen testing for gas, and when the fire boss would find it, he would mark the place and warn men not to go in until it had been cleared away, and until such time there would be no work done in such places.

"I felt the force of the explosion and remained about forty minutes afterwards; then, knowing there had been an explosion and seeing the loaders starting out, I followed on the Klondike side track. I saw the first body at No. 19 room, and felt the after-damp so strongly that I turned back to find fresh air. The "scraper" was with me; six loaders worked with me, who started out, while my "butty" and myself were putting our tools away; if they had gone out with us they could have been saved, but they went straight to the Klondike.

"The fire boss always stopped men who passed where he thought it was not safe, and gave them safety lamps at his shanty. The fire boss was Joe Tomlinson; I saw him every day."

Griffith Powell, after having been sworn, testified as follows:

"I am a fire boss in the Rolling Mill mine; had charge of the Klondike section up to five months previous to the explosion, but not since. Saw no indications of gas on falls in sixth right heading (shows location on map). I have had fire boss' certificate for eighteen months. The duties of a fire boss are to see that there is proper ventilation and to go inside the mine and examine each place carefully and put up danger signals when necessary. I knew nothing of the condition of the Klondike for upwards of a month previous to the explosion. I visited each room under my charge every morning before work was commenced, and made tests for gas, which required but a few seconds in each room. My round commenced about 4 o'clock, and occupied about two hours; about fifty men were employed in my district. (Illustrated how test for gas is made.) I enter each room every day, and if gas is found I mark the place with chalk and place props across, so that no person can enter without touching them. The majority of miners in my district were foreigners, whose language I could not understand, but they all understood what a safety lamp was for; also, what danger marks signified. Safety lamps are under the control of the fire boss and are given to the miners when they enter the mine. I have never given out an unlocked lamp. Was in the mine on the day of the explosion with four other fire bosses, and we were seated in an empty car on the main heading waiting to go home. We felt the explosion and, fearing that something was wrong, went back to the shanty and got safety lamps and reached No. 4, right,

in the Klondike, when Foster, another fire boss, and myself, went to the second right and notified all the men we met to go home.

"I keep a record of my work as fire boss in a book provided for the purpose by the State (book shown and identified). If gas should be found, a record is made in the book, which is kept in the fire boss' shanty, where it is examined by the mine foreman, and if he finds anything wrong noted, he investigates it. (Record book offered in evidence and accepted, and witness read the report made by John Retallick, fire boss, on the morning of the explosion.)

Mr. H. L. Rogers, mine foreman, was called for the purpose of explaining the record book and indicating upon the map the locations referred to by the report of Retallick on July 10, which was as follows: "Gas found on falls on fifth and sixth west entry, and on falls on fourth and sixth east. There is practically no gas in rooms this morning; all on falls and pillars. Signed, John Retallick."

The examination of Griffith Powells was resumed, and he said that it was not always practicable to remove gas from falls, from the difficulty of getting at it. Fire bosses made two rounds each day; they finished the first about 6.30 A. M., and commenced the second about 8 o'clock, to see than men were using safety lamps where ordered.

Two men had been discharged about two months before for disregarding danger signals; they were foreigners, who could not speak English; and two others were discharged, prosecuted and fined for passing a signal with open lights, but I do not know where they got the lamps, as the company provides plenty of safety lamps. It is customary for fire bosses to have open lights to use as far as a danger signal, and the men understand perfectly well that they must not go any further. I have personally searched men to ascertain if they had matches on them.

H. L. Rogers, mine foreman, testified that he was born in Wales and had thirty years' experience in mines, twenty-two of which were in this country. My duties are to see that the work in the mine is properly done, and that the rules and regulations are obeyed; in short, the mine is under my charge and direction. I see all the reports made by the fire bosses, and if gas is reported at any place, I investigate it and consult with the fire boss; we get rid of it by putting more air on it, and if it is caused by an obstruction, it is removed; the volume of air passing is measured with an anemometer. (Described how it is used.)

If we find there is an obstruction that causes the air to be weak, we ascertain what the cause is. Lamps are issued to men according to the places in which they work, but they are never permitted to go near gas with an open light, if we know it. In employing men

for the mine, I see them first, and if they are employed they are sent to the general office for record, and in any case, if I cannot understand their language we have an interpreter all the time. Have always made efforts to employ men who understand the nature of gas in mines. On the morning of the explosion, I was in the fire boss' shanty eating lunch. Fire bosses had just finished their day's work when I heard the concussion, and knew that an explosion had occurred, and we went to the Klondike and saw what had happened and found that a door was down and we replaced it as best we could. I told the men to go home; one of them was a witness yesterday. We went through the old workings until we got to second right heading, where we knew the air would be fresher, but found that the after-damp was becoming too strong and retraced our steps to the second right heading, and I remember no more. Messrs. Robinson, Retallick and Blanch were with me, and we saw Whitney when we got back, and he was still alive, and I remember nothing more until I was taken to the hospital.

"When I examined the fire boss' report, if there was a note that the air was 'fairly good,' I took measures to improve it."

Thomas J. Lewis testified as follows:

"I am a miner and worked in the Rolling Mill mine for more than eight years; have worked in the Klondike and have had sixteen years' experience in gaseous mines; have a certificate as fire boss, and have made tests for gas many times. I do not know anything about the explosion, but was one of the rescuing party. As soon as I heard of the explosion, I started in at the drift mouth; saw George Robinson, the superintendent, and the machine boss, Thomas Ownes, and we prepared lamps to start into the mine. I was sent by Mr. Moore to the office to stop any person from coming in. I then followed Mr. Moore and the others to the Klondike (course they took shown on map). I then assisted in getting out the bodies, but did not notice how many of them had been burned and how many were suffocated."

Thomas Foster testified as follows:

"I am assistant mine foreman in the Rolling Mill mine, and have been since December last, have been connected with this mine for seven years. My duties are to consult with the labor bosses and take up with them anything that needs any attention. It is customary for the foreman and fire bosses to consult as to the condition of the mine, and where it is best to proceed with the work. I go with one of the fire bosses every morning, taking each in turn. Was in sixth right heading about thirty minutes before the ex

plosion; had no safety lamp with me; saw no men with open lights; the men who worked in this locality were practical and experienced miners, some of whom had worked in that part of the mine before I went there.

"The cause of the explosion, in my opinion, was gas—fire-damp. I never knew of a safety lamp exploding. I have a fire boss' certificate. I was almost continuously with the rescuing party until I collapsed. There were from 575 to 600 men employed in the mine; there was always plenty of air; blasting coal was not permitted except by practical men, and before a shot would be fired, the place would be examined. The attention of foreign miners is called to the rules which were posted in the power house outside.

"If a fire boss failed to report in the morning, his district would be 'stopped,' until another one could examine it, and no work was permitted until that time. I saw Retallick's report on that morning and heard Mr. Rogers ask him how No. 6, right, was, and he intimated that it was the same as usual."

George F. Robinson testified that he was superintendent of the Rolling Mill mine and other mines of the Cambria Steel Company, and had been for more than thirteen months; previous to that time he was manager of the company's mines and coke ovens near Connellsville. Had not been in the mine on the day of the explosion, but was on the previous day; met Mr. Rogers by appointment on that day, and on the way into the mine we met Fire Boss Retallick coming up, and in answer to my inquiry as to how matters were, he replied "Pretty good—better than yesterday." The reason for this answer was that I had a conversation with him on the previous day as to the condition with reference to gas.

"The precautions used were safety lamps and danger signals; the miners were not permitted to use the "Davy" lamp, but the "Bonneted Clany Safety Lamb." (Witness placed in evidence a check taken from one of the empty cars in No. 2 room, sixth right heading; the check was numbered 108, and was Michael Evok's, who worked in No. 2 room; the following are the names of the men who worked there: Michael Evok, Gust Leavansdroskey, William Schonzik and Gottfried Hopke. These men were Germans. They are dead and I do not know where their bodies were found, but know they worked in that place.

"The Klondike district has never given us more trouble than any other part of the mine, only that for several weeks previous, it was the only part of the mine in which gas had been found, but not in sufficient quantities to cause any uneasiness. I consider myself a practical miner; commenced work when I was twelve years of age. My instructions to the mine foreman were to see that at all times and in every case, the law was obeyed. I had frequent

conversations with the mine foreman, Mr. Rogers, as to the part of the mine where gas was produced, and I frequently cautioned him not to allow men to go into such places without safety lamps.

"Men were working on the morning of the 10th on the 'long wall' and in No. 2 room. We tried always to have a thorough and sufficient current of air passing through that place.

"I examine the record books that are kept at the mine once a week and oftener, if necessary, and countersign them. When I heard of the explosion I was at my home, and left for the mine immediately; when I reached the mine, I inquired if any men were in, and when I found there were, I immediately set about the work of rescuing them, if possible. (Following this, the witness described the measures that were taken to rescue the men who were alive and to secure the bodies of the dead.)

"There were four fire bosses in the Rolling Mill mine and they were sober and experienced men. There were men of various nationalities employed, Slavs, Huns, Poles, Germans, English, Irish, Scotch and Welsh. I cannot say just how often the mine was inspected by the Inspector of Mines, but every two or three months. I think the last inspection was on July 2, but the Inspector goes into the mine without notifying me; in fact, I never went into the mine with him, but inspected it myself, taking sometimes two or three days to do so, but I have no stated times for making such inspections. I do not instruct men who fire shots, as that is the duty of the fire bosses. Mine supplies are kept outside of the mine and are sent in as needed; there is a 'supply house' in the mine, where some of them are kept. Safety lamps are kept in the fire boss' shanty, which is about one and one-half miles from the entrance to the mine, and there is about enough powder kept there for one day's supply.

"I never saw a miner working with an open lamp where gas was known to be. A report was made to me several weeks ago of two men who had crossed a danger signal with open lights, and I immediately took measures to have it brought to the Mine Inspector's notice, and the men were discharged. The explosion could not have occurred from taking down rock in No. 7 room.

"As to employing 'green' men, my instructions are that any inexperienced man should always be put to work with one who was experienced, and a man of that description was not permitted to go where there was gas in any case; none but competent men were allowed in such places.

"As to removing an accumulation of gas, I would consider any such dangerous, no matter how small it should be. I believe that the company had made every effort to safeguard the miners and mines that was possible."

Harry L. Rogers, mine foreman, was recalled, but being too ill to appear before the inquest, it was adjourned to his home. He testified as follows:

"I talked to the fire bosses every morning before they made their second round, and saw them on the morning of the explosion before they started on their second inspection, and they reported nothing new. I noticed the explosion. There was concussion of air. I do not remember the exact day when I last signed the fire boss' book.

"I had found gas on the falls myself and was careful to use every known precaution; have examined the falls frequently and found no gas. In going amongst the miners who had closed lamps, I never found them careless, nor did I ever find matches or smokers' articles on or near them. Open lights were permitted as far as 'danger marks' and there never were but one or two cases of violations of the rules. The work of the day and night shifts is continuous, as the night shift always starts before the day shift goes off, but the majority work on day turn. As to the boxes in the mine, the miners kept their tools in them, where they were locked to keep them safe. Boxes were not for the purpose of keeping open lights in.

"I can advance no theory as to the cause of the explosion; with the precautions taken there, it would seem to be impossible for an explosion to have occurred unless some one had disobeyed instructions, or some precaution had been neglected."

Josiah T. Evans testified as follows:

"I am Inspector of the Sixth Bituminous District, which takes in all of Cambria county and part of Somerset. My duties as Mine Inspector are to visit the mines that come under the provisions of the mine law and to see that the law is complied with. The last time I was in the Rolling Mill mine before the explosion was on July 2.

"My duties with reference to the safety of miners are to see that they have proper ventilation and the means to protect themselves from falls of coal and roof, and it is my duty to make recommendations looking to the welfare of the miners and the safety of the mine. The mine on July 2 was in good condition. I was in the Klondike region at that time; met Retallick, the fire boss, on that morning, also Mine Foreman Rogers, who went with me.

In reply to a question by James E. Roderick, Chief of the Bureau of Mines, he said: "I have made three visits to the Rolling Mill mine during this year; on the first and second visits I found the mine in good condition, but on the third visit I found gas in the fourth, left, but the place was fenced off and there was no one

working in it. I measured the air with the anemometer. I found the men all working with safety lamps. I was nearly eight hours making the last examination of the mine, and made a very thorough examination of the Klondike. I had always found everything in good condition on my visits."

(The Chief of the Bureau of Mines directed that any person in the room who wished to question the Mine Inspector was at liberty to do so, but there was no response.)

"The officials of the mine were all first class men. As to ventilation, I consider the fan sufficient to supply the mine. As to mining machines, those that are operated by electricity are cheaper than the ones operated by compressed air, but the latter are the safer. Whenever I made suggestions as to improvements to the mine officials, they were always complied with. I have been an Inspector in this district nearly eighteen years, and in that time there has been only one man killed by an explosion of gas in the Rolling Mill mine.

"Inspectors visit mines at any time they wish, and the officials do not know of my visits until they see me in the mine. Whenever I receive a complaint from miners, I make it a point to immediately make investigation as to its truth, but I have never had any complaint from a miner in the Rolling Mill mine."

Messrs. C. B. Ross, Isaac G. Roby and Joseph Williams, Mine Inspectors from the adjoining districts, who were called by the Chief of the Bureau of Mines to assist Mine Inspector Evans in the investigation as to the cause of the disaster, also testified at the inquest, and the substance of their evidence is practically the same as that embodied in the reports made by them to the Chief, which are given as part of this article.

The inquest in connection with this disaster was held over the remains of but one person, Gust Leavendroskey, miner, and the verdict rendered in his case applies to all the other 211 victims. The verdicts is as follows:

Gust Leavendroskey, a miner, came to his death as the result of an explosion of gas occurring in Rilling Mill Mine, of the Cambria Steel Company, of Johnstown, Cambria county, Pa., on the 10th day of July, 1902. That said explosion was caused by a person or persons, to the jury unknown, taking into room No. 2, right heading, where gas was known to exist, an open lamp and using same in direct violation of the mining rules and regulations of the Cambria Steel Company."

ABSTRACT OF BITUMINOUS REPORT 1902.

TOTAL NUMBER OF TONS OF COAL MINED AND TONS OF COKE PRODUCED, NUMBER OF DAYS WORKED, NUMBER OF EMPLOYEES, NUMBER OF EMPLOYEES KILLED AND INJURED, NUMBER KEGS OF POWDER, &c., USED IN THE BITUMINOUS DISTRICTS OF PENNSYLVANIA FOR THE YEAR ENDING DECEMBER 31, 1902.

DISTRICTS	Shipments of coal in tons by rail or otherwise	Number of tons used for steam and heat at collieries	Number of tons sold to local trade and used by employees	Total production of coal in tons	Total production of coke in tons	Number of coke ovens	Average number of days worked	Number of employees	Number of fatal accidents	Number of non fatal accidents	Number of kegs of powder used	Number pounds of dynamite used	Number horses and mules in use	NUMBER OF BOILERS				LOCOMOTIVES				Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity in gallons delivered to surface per minute	Number of electric dynamos	Number of air compressors
														Cylindrical	Horizontal	Tubular	Hot water	Total horse power	Steam	Compressed air	Electric							
First	1,773,522	121,749	12,805	1,908,076	1,999,933	4,548	195.7	12,332	66	180	61,113	16,764	157	45	1,177	169	99,257	11,626	1	12	194	16,975	94	13,422	7,643	54	31	
Second	1,475,576	226,413	71,679	1,733,664	1,999,998	4,548	195.8	12,316	42	67	10,893	16,155	1,212	57	2,924	177	12,636	22,814	16	3	14	184	18,950	160	31,750	21,629	23	40
Third	1,969,944	319,564	119,379	2,399,887	2,499,998	4,548	195.6	10,150	15	37	26,196	26,612	719	16	22,664	121	32,166	16,245	9	12	34	6,673	60	13,124	15,723	7	40	
Fourth	1,923,583	30,880	10,256	1,964,619	1,999,933	4,548	195.7	9,474	11	23	24,225	24,719	716	11	430	96	17,178	10,915	16	1	26	37	7,322	21	22,818	8,183	11	31
Fifth	2,823,450	213,112	74,300	3,110,862	4,335,453	10,669	265.7	12,794	34	69	12,875	479,915	1,350	14	2,029	188	11,728	50,366	21	7	160	16,495	22	24,645	10,167	27	20	
Sixth	1,192,530	178,519	19,462	1,390,511	200	27	264.4	12,111	134	53	10,509	68,604	778	49	9,345	134	10,617	19,372	4	2	187	12,078	21	26,975	13,316	47	31	
Seventh	2,113,164	117,645	134,471	2,365,280	9,523,627	194.5	118,969	40	124	27,646	6,324	1,066	48	1,141	177	22,165	22,616	13	1	43	199	17,404	113	19,170	16,433	43	45	
Eighth	1,241,594	52,134	11,988	1,305,716	44,731	106	162.0	7,494	3	25	20,791	12,408	928	22	6.0	43	6,137	4,806	3	26	0	6,261	65	26,030	3,114	11	9	
Ninth	1,136,843	209,496	21,464	1,367,803	2,940,734	4,322	156.8	12,451	20	71	16,465	42,773	1,230	29	1,218	169	15,496	19,253	5	6	34	183	12,328	84	21,464	18,972	23	27
Tenth	2,929,920	191,104	43,645	3,164,669	124,468	1,767	222.0	10,790	34	43	19,821	45,082	937	47	1,071	129	9,196	14,638	8	50	196	7,772	32	18,494	16.1	23	31	
Eleventh	1,463,355	145,817	114,681	1,723,853	8,285,747	9,495	209.6	10,711	20	79	17,461	25,840	1,306	43	2,024	135	12,911	16,115	10	6	113	54,619	76	37,671	11,256	16	18	
Twelfth	2,137,196	145,128	19,123	2,301,447	571,872	1,327	146.6	8,968	18	66	37,977	51,899	680	16	6.6	134	15,115	4,390	11	23	88	9,100	76	26,577	22,611	17	32	
Total	18,902,767	1,999,495	1,010,719	21,913,981	14,945,091	16,428	220.4	135,384	456	691	378,063	521,143	11,553	612	48,647	1,689	161,618	180,100	171	16	323	7,441	162,417	591	332,919	123,172	204	326

*113 persons were killed by an explosion of gas at the Rolling Mill Mine, Johnstown, July 10

Table showing the number of each class of employees in each Bituminous district for the year 1902.

Occupations of Persons Employed Inside.											Occupations of Persons Employed Outside.										
Districts.																					
Mine foremen.	Assistant mine foremen.	Fire bosses.	Miners.	Machine runners.	Machine loaders.	Machine scrapers.	Drivers and runners.	Door boys and helpers.	Company men.	All other employees.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	Coke employees.	Bookkeepers and clerks.	All other employees.	Total outside.	Grand total, inside and outside.	
First,	72	11	96	2,221	421	5,422	410	869	201	365	410	10,592	62	21	180	236	.....	84	957	1,540	12,132
Second,	74	21	51	7,482	175	1,444	154	918	227	500	201	11,317	57	54	223	233	.....	77	1,007	3,199	14,516
Third,	117	17	3	4,568	329	1,974	309	621	121	302	161	8,916	78	13	155	170	145	82	594	1,237	10,113
Fourth,	62	11	3	6,433	75	676	75	458	176	173	248	8,490	26	22	110	117	75	56	748	1,184	9,674
Fifth,	67	9	71	5,725	74	422	74	716	101	381	412	8,062	56	67	196	218	3,051	88	1,016	4,712	12,794
Sixth,	85	37	11	4,959	353	2,291	353	728	200	413	511	11,862	52	27	152	233	3	79	702	1,249	12,111
Seventh,	81	16	78	3,739	607	4,889	580	898	195	498	342	11,832	51	10	252	262	.....	87	1,075	1,737	13,569
Eighth,	125	18	.....	5,514	29	327	34	422	77	379	57	6,940	70	10	99	79	41	93	162	554	7,494
Ninth,	176	18	62	5,762	145	1,787	130	763	127	486	262	9,433	43	51	171	210	1,757	94	831	3,163	12,451
Tenth,	116	21	9	4,724	270	2,576	270	643	251	442	177	9,232	60	25	168	177	583	60	488	1,561	10,793
Eleventh,	65	8	49	4,201	54	2,447	54	618	121	338	310	7,422	48	64	151	151	2,330	72	721	4,189	10,731
Twelfth,	69	4	7	3,217	408	2,581	481	417	96	216	91	7,687	37	18	105	141	529	43	298	1,271	8,968
Totals,	1,009	188	427	59,025	2,940	25,766	2,942	8,661	1,873	4,484	3,195	110,015	647	382	1,992	2,282	10,632	915	8,699	25,371	135,386

Table showing causes of fatal accidents and number attributable to each cause, that occurred in and about the Bituminous mines, and number of wives widowed and children left orphans by such casualties during the year 1902.

Causes of Accidents																											
1st Dist.		2d Dist.		3d Dist.		4th Dist.		5th Dist.		6th Dist.		7th Dist.		8th Dist.		9th Dist.		10th Dist.		11th Dist.		12th Dist.		Total.		Percentage.	
Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.
2	10	1	10	14	6	2	14	2	14	5	26	1	2	1	1	7	19	1	4	11	20	1	1	34	189	7.61	42.76
4	25	1	1	1	1	1	1	1	1	5	7	1	1	1	1	5	4	4	4	4	6	1	4	47	1	10.63	7.14
9	1	1	1	2	1	2	1	1	1	112	1	1	1	1	1	1	1	1	1	1	1	1	1	126	4	28.57	23.57
1	1	1	1	1	1	2	1	1	1	2	5	1	1	1	1	5	4	4	4	4	6	1	4	3	5	1.68	1.13
1	1	1	1	1	1	5	1	4	1	5	1	1	1	1	1	4	1	1	1	3	1	2	1	7	11	1.58	1.58
12	1	2	1	1	1	1	1	1	1	1	3	1	1	1	1	3	1	1	1	1	1	1	1	20	9	2.40	4.62
45	3	40	2	14	1	10	1	33	1	134	39	1	2	1	57	1	23	1	28	1	29	1	18	442	14	96.93	3.07
Totals,																											

Wives made widows, 292
Children orphaned, 621

Table showing causes of non-fatal accidents and number attributable to each cause, that occurred in and about the Bituminous mines for the year 1902.

Causes of Accidents.	1st Dist.		2d Dist.		3d Dist.		4th Dist.		5th Dist.		6th Dist.		7th Dist.		8th Dist.		9th Dist.		10th Dist.		11th Dist.		12th Dist.		Total.		Percentage.	
	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.
By falls of coal,	13	1	10	1	8	1	3	10	2	4	15	15	3	12	8	3	42	14	1	5	1	1	1	1	111	13.72	.....	.....
By falls of slate and roof,	25	1	27	1	15	1	9	21	2	11	61	61	1	8	1	1	42	11	1	21	1	1	1	1	333	3.10	.....	.....
By mine cars,	31	1	15	1	5	1	9	23	2	11	37	37	2	5	2	18	18	1	11	1	40	3	3	1	241	23.30	60.00	.....
By machinery,	3	1	1	1	1	1	5	1	1	1	3	3	1	1	1	1	1	1	1	1	2	2	2	2	18	1.8	5.75	.....
By explosions of gas and dust, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
By explosions of powder and dynamite, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
By explosions of blasts, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
By suffocation, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
By falling into shafts, etc., .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
By mules, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
From miscellaneous causes,	47	3	5	2	1	1	3	1	4	.....	.....	1	5	4	.....	.....	3	1	1	1	3	3	1	1	79	9.57	16	44.44
Totals,	170	4	62	7	36	1	35	3	66	2	30	128	6	25	2	63	2	63	40	3	73	6	84	2	825	36	49.92	90.99

Nationality by birth of employees who were killed or fatally injured in and about the mines of the Bituminous region, from 1899 to 1902, inclusive.

Years.	Americans	English.	Welsh.	Scott.	Irish.	Germans.	Slavs.	Italians.	Poles.	Hungarians.	Austrians.	Swedes.	Russians.	Belgians.	Bohemians.	French.	Fins.	Canadians.	Lithuanians.
1899.	62	14	7	10	16	46	26	20	16	13	5	4	2	4	3	1	2	1	6
1900.	71	24	9	11	10	56	29	29	13	12	7	3	4	2	3	2	2	1	.....
1901.	72	27	6	11	13	59	32	28	13	24	4	3	4	.....	2	2	2	1	.....
1902.	59	27	7	7	14	84	60	50	36	23	4	11	2	2	1	1	2	1	.....

Statement showing quantity of coal produced by each company that produced 700,000 tons or more; the inspection districts in the Bituminous region in which such companies' mines are located, and number employed by each of these companies, for the year 1902.

Names of Companies.	Number of Inspection Districts.	Number of employee.	
		Production of coal in tons.	Number of employee.
Pittsburg Coal Co.,	First, Third, Fifth, Seventh, Ninth and Eleventh,	11,965,479	14,482
H. C. Frick Coal and Coke Co.,	Second, Fifth, Ninth and Eleventh,	7,487,668	10,433
Monongahela River Consolidated Coal and Coke Co.,	First, Fifth, Seventh and Eleventh,	4,341,371	6,439
Berwind-White Coal Mining Co.,	Sixth, Eighth and Twelfth,	4,374,928	6,401
Rockwell and Pittsburg Coal and Iron Co.,	Fourth and Twelfth,	3,382,928	9,734
J. K. Royston and Cleatfield Coal and Iron Co.,	Third, Fourth and Twelfth,	2,338,549	2,637
Keyser and Cleatfield Coal Co.,	Second,	2,156,657	2,354
S. W. Campbellville Coke Co.,	Fifth and Eleventh,	2,016,633	2,894
W. J. Ramey Coal Co.,	Fifth, Ninth and Eleventh,	1,758,448	2,340
Westmoreland Coal Co.,	Second,	1,568,748	1,705
Beech Creek Coal Co.,	Sixth, Tenth and Twelfth,	1,542,824	2,055
Webster Coal and Coke Co.,	First and Tenth,	1,465,179	1,278
Cleatfield Bituminous Coal Corporation,	Fourth, Tenth and Twelfth,	1,336,571	2,328
Cambria Steel Co.,	Sixth and Ninth,	1,306,295	1,722
New York and Cleveland Gas Coal Co.,	Third and Seventh,	1,300,250	1,549
Continental Coke Co.,	Fifth and Eleventh,	1,172,987	1,307
Somerset Coal Co.,	Ninth,	599,335	1,204
Washington Coal and Coke Co.,	Washington,	597,245	1,562
Went Gas Coal Co.,	Second and Eleventh,	397,413	1,202
North West Mining and EX. Co.,	Fourth,	896,000	1,236
Peate, Peacock & Kerr, Inc.,	Third, Eighth and Twelfth,	858,560	1,444
Totals,		57,547,785	71,238

Number and percentage of each class of fatal accidents that occurred in and about the Bituminous coal mines from 1893 to 1902 inclusive.

Causes of Accidents.	Years.										Totals.	Percentages.
	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.		
By falls of coal, slate and roof,	105	94	102	115	110	142	163	170	186	223	1,410	66.13
By mine cars,	14	20	28	22	20	21	37	39	48	47	291	13.88
By explosions of gas,	1	.....	4	1	2	11	29	8	28	126	228	10.69
By explosions of water and brack,	2	3	5	1	4	9	7	9	8	8	52	2.4
By falling into shafts and slopes, .....	.....	4	1	.....	1	1	3	6	1	11	28	1.31
By machinery, .....	.....	.....	.....	1	1	.....	.....	1	2	.....	6	.3
By tools, .....	.....	.....	1	1	.....	.....	.....	1	4	.....	7	.3
By electric shocks, .....	.....	.....	1	2	2	2	5	6	7	7	31	1.45
By suffocation,	4	3	7	5	2	4	.....	1	1	.....	13	.60
From miscellaneous causes,	3	3	.....	.....	2	1	4	11	6	29	62	2.80
Totals, accidents inside,	129	124	118	167	142	187	248	252	291	442	2,132	99.94
By cars, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
By machinery,	2	.....	4	6	1	6	3	10	5	1	38	45.28
By suffocation, .....	.....	.....	2	2	2	2	2	.....	2	4	14	16.60
By boiler explosions, .....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1	.88
From miscellaneous causes, .....	.....	.....	1	2	3	.....	1	.....	.....	.....	6	7.19
Totals, accidents outside,	2	.....	7	10	7	11	10	12	11	14	84	99.81

Number of gaseous and non-gaseous mines, number of foremen, assistants and fire bosses, production from gaseous and non-gaseous mines, and percentage of production from each district in the Bituminous region for 1902.

Districts.	Number of gaseous mines in each district.		Number of foremen and assistants in gaseous mines.		Number of fire bosses.		Number of non-gaseous mines in each district.		Number of foremen and assistants in non-gaseous mines.		Production in tons from gaseous mines.		Production in tons from non-gaseous mines.		Percentage of production from gaseous mines.		Percentage of production from non-gaseous mines.	
	Number of gaseous mines in each district.	Number of foremen and assistants in gaseous mines.	Number of fire bosses.	Number of non-gaseous mines in each district.	Number of foremen and assistants in non-gaseous mines.	Production in tons from gaseous mines.	Production in tons from non-gaseous mines.	Percentage of production from gaseous mines.	Percentage of production from non-gaseous mines.									
First,	50	63	90	23	20	9,242,827	1,737,706	84.17	15.82									
Second,	27	30	51	50	136	6,711,583	4,311,588	60.91	39.08									
Third,	3	4	3	119	58	150,610	6,677,713	2.20	97.79									
Fourth,	2	4	3	57	62	558,828	5,910,774	7.91	92.08									
Fifth,	34	4	71	39	31	8,374,227	7,174,708	87.69	12.30									
Sixth,	1	1	11	88	122	7,785,968	2,637,979	8.31	90.68									
Seventh,	41	53	78	40	43	7,483,658	4,376,792	78.62	20.38									
Eighth,	14	44	62	126	141	7,596,192	2,872,781	73.88	26.11									
Ninth,	1	4	2	68	50	222,498	6,551,477	3.27	96.72									
Tenth,	31	3	49	120	135	5,816,889	2,270,253	72.56	27.43									
Eleventh,	7	8	7	3	38	2,282,847	4,556,140	33.39	66.61									
Twelfth,				67	65													
Totals and percentages,	215	301	427	858	903	49,135,353	49,820,850	49.64	50.35									

Production of coal in tons from the Bituminous mines, from 1893 to 1902 inclusive.

Districts	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	*1901.	1902.
First.	4,876,207	5,282,181	5,539,451	6,697,691	6,473,270	8,909,329	9,297,676	8,651,281	8,118,678	10,480,533
Second.	6,675,978	6,424,673	9,128,787	7,761,771	9,123,797	9,820,673	12,677,161	13,678,190	8,222,751	1,731,423
Third.	3,224,130	2,641,120	3,254,397	3,243,851	3,440,392	3,761,683	4,237,622	4,927,877	5,601,777	6,735,777
Fourth.	4,870,122	4,296,797	9,291,371	5,762,765	6,541,943	4,516,941	4,207,541	8,113,973	7,994,776	6,713,810
Fifth.	3,629,559	3,078,218	6,423,872	4,979,110	6,371,574	7,174,853	8,774,977	10,054,577	6,848,951	9,548,876
Sixth.	3,140,284	2,971,088	4,406,760	4,752,873	5,361,671	5,103,671	5,774,977	6,487,157	8,227,005	8,410,861
Seventh.	4,435,416	2,438,875	4,662,308	3,624,375	5,163,155	4,103,577	6,487,157	6,933,576	3,783,281	9,223,610
Eighth.	5,043,478	3,434,778	4,662,308	3,624,375	5,163,155	4,103,577	6,487,157	6,933,576	3,783,281	4,376,762
Ninth.	4,814,178	4,660,771	4,662,308	3,624,375	5,163,155	4,103,577	6,487,157	6,933,576	3,783,281	10,158,976
Tenth.	2,772,116	1,882,530	2,708,271	2,857,696	3,261,976	3,401,281	3,886,762	4,390,572	5,122,112	6,667,786
Eleventh.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Twelfth.	.....	.....	.....	.....	.....	.....	.....	.....	5,173,992	6,838,685

*Two additional districts were created in 1901.

Production of coke in tons from 1893 to 1902 inclusive.

Districts.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.
First,	1,511,871	1,675,243	2,569,085	1,902,643	2,506,350	3,049,537	4,075,882	4,280,384	1,498,520	1,986,976
Second,	27,099	3,488	.....	24,723	39,020	95,177	88,717	95,501	151,885	186,898
Third,	289,844	242,510	306,198	409,086	441,916	573,349	435,264	480,671	44,376	137,121
Fourth,	2,083,533	2,204,571	3,136,487	2,629,541	3,432,299	3,961,669	4,471,233	4,477,672	3,391,546	4,255,453
Fifth,	100,768	4,000	15,000	151,154	240,559	236,663	267,787	256,481	.....	300
Sixth,	3,000	6,000	.....	.....	.....	.....	.....	.....	.....	.....
Seventh,	50,837	13,292	91,140	47,877	4,000	15,525	3,945	20,721	2,757	44
Eighth, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ninth,	1,240,164	1,473,982	1,955,296	1,265,218	1,593,295	2,093,697	2,575,111	2,546,133	2,838,541	2,617,731
Tenth,	224,151	147,786	1,42,221	155,614	191,882	298,270	252,461	332,631	435,643	634,365
Eleventh, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Twelfth, .....	.....	.....	.....	.....	.....	.....	.....	.....	527,837	671,875

Production of Bituminous coal in tons by counties from 1893 to 1902 inclusive.

Counties.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.
Allaheeny,	6,894,540	6,415,611	7,116,699	7,898,414	7,122,227	9,079,104	9,978,790	10,313,039	11,248,921	13,148,167
Armstrong,	390,222	577,928	619,174	566,771	570,343	813,486	1,037,256	1,230,052	1,089,052	1,972,517
Beaver,	131,345	135,722	267,863	286,581	283,149	236,376	291,777	239,237	479,110	32,371
Bellard,	490,416	288,733	436,744	219,537	372,535	297,631	530,767	530,648	476,985	77,245
Bell,	170,144	269,211	321,711	271,227	331,535	297,631	115,751	251,997	294,015	255,619
Bradford,	42,759	125,321	221,711	221,477	341,588	327,568	327,568	327,568	327,568	327,568
Butler,	3,772,453	3,772,453	221,711	221,477	221,477	161,224	293,170	231,013	325,451	482,22
Cambridge,	1,259,531	3,063,291	4,061,829	4,899,068	5,551,721	6,504,949	7,272,614	11,581,053	8,614,442	10,259,761
Centre,	1,174,548	1,174,548	303,813	445,268	496,472	568,128	872,771	997,820	812,980	1,017,468
Clinton,	1,772,222	1,01,688	425,075	361,782	581,776	356,476	270,956	396,985	376,429	453,262
Columbia,	6,081,224	4,156,210	5,442,549	4,886,733	5,322,472	4,886,780	5,890,467	2,819,169	5,232,054	6,422,836
Ellington,	94,382	100,690	94,382	134,768	137,388	166,226	221,060	288,881	396,228	370,232
Ell,	61,878	515,170	612,128	798,069	765,110	873,448	1,212,102	1,246,783	1,241,200	1,424,865
Fayette,	6,105,845	6,481,155	10,124,541	8,562,571	10,112,944	13,099,756	14,765,814	15,013,277	15,478,041	18,921,301
Greene,	291,739	187,670	289,962	331,535	285,676	286,620	327,106	33,243	330,463	446,316
Huntingdon,	339,170	406,878	483,765	202,029	532,988	712,925	611,358	836,347	836,689	1,427,721
Indiana,	3,072,257	3,467,481	4,328,774	4,717,573	5,306,160	6,045,800	6,411,366	6,989,667	7,292,822	7,292,822
Jefferson,	197,277	135,411	227,791	198,666	186,506	186,324	161,351	170,867	163,469	191,871
Lawrence,	53,192	86,100	86,309	82,707	97,092	59,631	105,455	107,084	107,085	112,320
Ligonier,	13,165	29,841	50,377	52,939	47,092	39,631	35,455	37,618	55,873	7,245
McKean,	489,160	297,345	502,345	522,317	495,362	340,382	476,618	558,557	587,544	600,811
Meteor,	482,770	439,188	521,965	621,389	1,166,337	1,729,662	2,686,249	4,263,259	3,898,735	5,191,046
Seneca,	90,538	90,538	90,538	90,538	925,873	917,095	634,301	922,701	859,077	1,073,923
Sullivan,	942,252	684,627	3,410,394	4,306,518	3,761,244	4,661,180	4,779,067	4,884,828	5,092,593	7,480,514
Washington,	3,414,444	3,373,778	3,410,394	4,306,518	3,761,244	4,661,180	4,779,067	4,884,828	5,092,593	7,480,514
Westmoreland,	7,568,246	7,739,080	19,25,246	8,566,705	10,127,905	11,475,891	14,180,423	14,872,546	16,199,709	18,799,104
Totals,	43,421,498	38,060,250	55,813,112	50,273,655	54,674,322	64,247,665	776,066,942	79,318,362	80,914,256	98,946,293

*Since 1884, in anthracite region.
 *26 7/8 tons production of small mines not under provisions of law.

Production of coke in tons by counties from 1893 to 1902 inclusive.

Counties.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.
Allegheny.	3,099	6,000	5,000	250	4,540	525		1,000	6,000	8,850
Armstrong.	6,556									
Beaver.	106	80								
Bedford.	3,440	6,016	40,420	38,500		39,708	51,036	101,546	67,887	91,516
Blair.	79,351	8,290	28,750	33,545	36,564	39,680	17,932	72,589	73,323	90,734
Bradford.		42,747	142,647	165,465	263,474					
Cambria.	122,219									
Centre.	83,203	13,669				265,282	313,424	318,228	302,342	341,494
Clearfield.	131,360	45,574	117,830	157,756	191,040	173,108	277,722	135,451	105,379	218,867
Elk.	29,421	8,257						850		25,453
Franklin.	3,611,654	3,426,791	5,331,887	3,692,397	4,851,918	5,669,204	6,421,534	6,276,894	7,023,380	8,030,420
Indiana.	19,103						3,750			32,700
Jefferson.	33,629	5,250	7,172	22,798	16,310	15,712	48,760	68,393	2,646	67,697
Monroe.	256,473	219,655	276,578	407,865	445,013	619,731	535,427	536,239	594,849	697,697
Somerset.	9,863	5,027	6,862	9,086		14,937	24,971	21,749	13,549	27,816
Tioga.	984	450	976	1,032	476	503				
Washington.				7,200						
Westmoreland.	1,700,800	1,367,128	2,566,908	2,073,291	2,723,636	3,351,525	4,548,121	4,632,243	4,935,782	5,304,307
Totals.	5,459,297	5,724,244	8,922,380	6,613,233	8,533,291	10,171,920	12,192,570	12,185,112	13,125,156	14,941,091

Number of employes in and about the Bituminous Mines from 1893 to 1902 inclusive.

Districts.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.
First,	10,114	11,175	11,086	10,977	10,665	9,720	9,880	10,942	10,196	12,132
Second,	10,893	12,148	11,195	11,040	12,72	12,501	14,758	17,552	11,517	14,516
Third,	6,112	6,74	6,211	6,964	6,131	6,538	6,181	7,650	8,811	11,153
Fourth,	8,293	9,036	8,578	8,568	9,581	9,961	9,610	10,383	9,581	9,674
Fifth,	6,663	7,619	8,389	7,524	8,650	9,321	10,418	13,897	11,602	12,74
Sixth,	6,353	6,944	7,081	8,010	8,66	10,48	11,611	14,879	10,666	12,111
Seventh,	9,398	9,844	9,838	10,564	9,932	9,656	8,390	10,045	10,758	13,509
Eighth,	9,423	8,160	8,671	7,197	6,283	5,812	6,140	7,330	6,115	7,44
Ninth,	8,754	9,279	8,557	8,273	8,509	8,152	8,121	8,969	12,601	12,41
Tenth,	5,697	6,247	6,098	5,389	5,493	5,653	5,778	7,401	9,177	10,793
Eleventh,									10,756	10,731
Twelfth,									7,624	8,468
Totals,	81,950	86,186	84,104	83,796	86,483	87,802	91,440	109,018	117,662	125,286

Number of employees in and about the mines of the Bituminous region by counties from 1893 to 1902 inclusive.

Counties.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.
Allegheny,	14,351	15,345	15,022	14,732	14,395	14,052	13,160	15,060	14,93	17,317
Armstrong,	6,2	1,204	1,139	1,100	971	1,727	1,436	2,455	2,483	3,361
Beaver,	293	455	532	648	417	441	473	457	452	438
Bellford,	967	845	803	831	804	915	978	1,112	1,301	1,436
Blair,	536	707	788	753	5,6	666	297	510	508	680
Bradford,	83	90	109	115	127	76	68	66	57	57
Butler,	228	461	483	500	590	425	341	513	659	1,071
Cambria,	6,031	7,048	7,29	8,237	8,118	9,284	9,782	17,652	14,152	14,98
Centre,	2,416	1,647	632	773	664	996	1,165	1,377	1,217	1,282
Charlton,	1,628	1,021	832	828	1,185	575	58	775	802	900
Charfield,	10,973	9,733	9,46	8,989	9,016	7,917	8,072	4,127	9,202	10,573
Cleburn,	1,320	1,301	1,398	211	236	1,206	235	254	351	48
Elk,	1,322	1,351	1,035	217	1,255	1,67	1,786	1,849	2,107	2,311
Fayette,	11,185	12,566	13,381	12,260	13,872	14,563	15,838	18,290	21,518	23,312
Greene,	630	680	630	701	590	460	52	675	815	89
Huntingdon,	873	760	707	800	675	696	72	1,701	1,760	1,099
Indiana,	4,234	6,312	6,156	5,972	6,139	7,278	7,023	7,401	7,353	8,414
Jefferson,	460	494	503	434	555	500	372	430	410	472
Lawrence,	118	166	164	166	190	193	203	200	220	272
Lycoming,	39	42	86	94	95	70	53	51	50	18
McKean,	1,010	1,136	1,118	1,022	1,078	938	792	918	970	1,143
Mercer,	895	855	618	880	1,449	2,671	3,779	5,672	5,245	7,486
Somerset,	337	337	337	337	337	337	337	337	337	337
Sullivan,*	2,270	2,207	2,185	1,988	2,09	2,297	1,910	2,024	2,113	2,201
Toga,	7,110	6,998	6,855	7,355	6,532	5,299	5,263	6,55	6,871	8,586
Washington,	13,016	14,570	14,203	13,389	14,270	14,519	16,615	18,847	21,869	24,377
Westmoreland,										

*In anthracite region since 1894.

List of fatal accidents that occurred in and about the Bituminous coal mines from 1893 to 1902 inclusive.

Districts.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.
First.	25	25	25	44	22	42	44	37	41	66
Second.	14	18	32	26	21	30	36	36	29	42
Third.	3	9	7	3	10	8	8	6	7	15
Fourth.	5	11	14	26	10	15	21	21	13	11
Fifth.	12	13	13	18	26	13	50	40	41	31
Sixth.	12	13	8	11	8	23	38	39	18	134
Seventh.	21	9	18	22	23	26	28	23	35	40
Eighth.	29	13	13	6	7	7	11	9	3	3
Ninth.	15	11	20	19	19	28	23	21	41	58
Tenth.	4	2	5	4	7	11	9	21	8	24
Eleventh.	.....	.....	.....	.....	.....	.....	.....	.....	46	30
Twelfth.	.....	.....	.....	.....	.....	.....	.....	.....	20	19
Totals.	131	124	155	179	149	198	258	264	301	456

List of non-fatal accidents that occurred in and about the Bituminous coal mines from 1893 to 1902 inclusive.

Districts.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.
First,	77	101	66	123	89	109	114	144	142	180
Second,	28	30	25	31	52	66	42	56	52	67
Third,	55	12	23	17	24	22	21	53	40	37
Fourth,	22	20	22	18	32	23	33	50	44	38
Fifth,	44	47	70	48	71	62	70	56	45	68
Sixth,	15	17	19	16	24	30	33	38	31	30
Seventh,	44	47	55	49	58	30	64	72	73	134
Eighth,	31	17	34	36	29	22	43	27	33	28
Ninth,	35	40	40	41	23	26	37	37	32	71
Tenth,	25	17	25	18	18	27	38	50	51	43
Eleventh,									53	79
Twelfth,									69	86
Totals,	346	357	419	398	426	458	487	583	656	861

Number of fatalities and causes of fatal accidents that occurred in and about the mines of the Bituminous region from 1893 to 1902 inclusive.

Years.	Inside of Mines.										Outside of Mines.					
	By Falls of		By Falling Into		By Shafts.		By Electric shocks.		By Explosions of blasts.		By Explosions of powder and dynamite.		By machinery.		By mine cars.	
	Coal.	Slate and roof.	Slopes.	M a n w a y s and breasts.	By mules.	By suffocation.	Miscellaneous causes.	Total inside.	By cars.	By machinery.	By suffocation.	Boiler explosions.	Miscellaneous causes.	Total outside.	Grand total.	
1893.	85	16	1	1	2	3	4	123	1	1	1	1	1	1	129	1
1894.	23	22	4	1	1	1	1	11	4	1	1	1	1	1	114	1
1895.	16	31	17	2	1	1	1	57	1	1	1	1	1	1	156	1
1896.	21	22	1	1	1	1	1	27	1	1	1	1	1	1	153	1
1897.	21	92	20	1	1	1	1	131	1	1	1	1	1	1	230	1
1898.	26	105	35	1	1	1	1	190	1	1	1	1	1	1	278	1
1899.	26	137	40	1	1	1	1	211	1	1	1	1	1	1	308	1
1900.	38	129	49	1	1	1	1	260	1	1	1	1	1	1	365	1
1901.	34	152	48	1	1	1	1	290	1	1	1	1	1	1	395	1
1902.	34	189	47	1	1	1	1	442	1	1	1	1	1	1	466	1

Statement Showing Production of Bituminous Coal, Quantity of Explosives Used, Number of Tons of Coal Produced for each Pound of Explosives Used, and Average Quantity of Coal Produced for each Employee Inside of Mines, from 1892 to 1902 Inclusive.

Years.	Production of coal in tons	Average number of tons produced per each employee inside.	Number of pounds of black powder used.	Number of pounds of dynamite used.	Average number of tons produced per pound of explosives used.
1892.	46,225,552	702	2,696,450	.....	17.16
1893.	43,422,468	622	2,004,425	.....	14.45
1894.	39,800,210	541	2,918,875	.....	13.64
1895.	51,813,112	726	3,731,700	.....	13.83
1896.	50,273,656	702	3,639,650	.....	13.81
1897.	54,674,272	736	4,318,425	*73,874	12.44
1898.	64,247,635	871	5,526,250	141,336	11.63
1899.	73,066,943	975	6,690,700	222,076	10.62
1900.	79,318,362	884	7,409,925	243,517	13.07
1901.	80,914,236	846	7,851,500	693,801	9.47
1902.	98,946,203	899	9,965,725	921,149	11.10

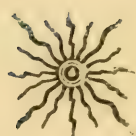
*Quantity of dynamite used was not reported until 1897.

Number of Mines in which Mining Machines are used; Number of Machines in each Bituminous District; Motive Power used to Operate them, and Number of Tons of Coal Produced in each District by Machines in 1902.

Districts.	Number of mines in which machines are used.	Number of machines operated by electricity.	Number operated by compressed air.	Total number of mining machines in use.	Production of coal in tons in each district by mining machines.	Production from pick mining.
First.	59	239	98	337	8,493,184	2,487,849
Second.	15	45	115	160	1,982,828	9,048,895
Third.	34	18	302	320	1,284,966	5,553,367
Fourth.	12	46	115	161	1,257,597	5,161,213
Fifth.	16	44	45	89	1,508,125	8,040,770
Sixth.	26	9	386	395	4,204,040	4,206,821
Seventh.	61	363	235	598	5,804,566	3,718,771
Eighth.	9	8	53	61	481,661	3,895,101
Ninth.	23	87	24	111	2,988,588	7,170,488
Tenth.	42	71	195	266	3,069,574	8,712,291
Eleventh.	12	34	16	60	971,158	7,085,975
Twelfth.	5	5	230	264	4,197,628	2,641,357
Totals.	317	969	1,843	2,812	36,224,155	62,722,049

Fatal Accidents per each 1,000 Employees in and about the Bituminous Coal Mines and Tons of Coal Mined for each Fatal Accident from 1884 to 1902 Inclusive.

Years.	Employees.	Fatal accidents.	Fatal accidents per 1,000 employees.	Number of tons of coal mined.	Number of tons mined for each fatal accident.
1884,	39,994	105	2.625	20,553,090	195,743
1885,	44,145	72	1.630	24,030,919	333,763
1886,	51,846	81	1.562	28,607,173	353,175
1887,	57,774	103	1.783	33,902,030	324,146
1888,	61,564	89	1.445	33,832,285	380,138
1889,	55,600	105	1.888	34,625,449	329,766
1890,	66,851	146	2.183	40,740,521	279,045
1891,	74,166	236	3.182	41,831,456	177,252
1892,	78,784	133	1.688	46,225,552	347,580
1893,	79,834	121	1.640	43,422,498	331,449
1894,	86,177	124	1.441	39,800,210	324,194
1895,	84,904	155	1.825	51,813,112	334,278
1896,	83,796	179	2.136	50,273,656	280,858
1897,	86,483	149	1.723	54,674,272	366,941
1898,	87,802	198	2.215	64,247,635	323,483
1899,	91,440	258	2.821	72,866,943	282,429
1900,	109,018	265	2.430	79,318,362	311,311
1901,	117,602	301	2.559	80,914,236	268,818
1902,	135,386	456	3.368	98,946,203	216,967



ANTHRACITE MINE DISTRICTS.



First Anthracite District.

LACKAWANNA, SUSQUEHANNA AND WAYNE COUNTIES.

Scranton, Pa., March 31, 1903.

Hon. James W. Latta, Secretary of Internal Affairs, Harrisburg, Pa.

Sir: I have the honor of herewith transmitting to you my report as Inspector of Mines for the First Anthracite District for the year ending December 31, 1902.

The total production of coal was 4,932,924 tons, or 2,795,420 tons less than in 1901. This, as you are aware, was owing to the strike, which lasted nearly six months.

The average number of days worked by forty collieries was 115.28 against 198.7 in the preceding year.

There were 18,490 persons employed, 29 of whom lost their lives, leaving 10 widows and 20 children orphaned. For every life lost there were 170,100 tons of coal produced, and for each non-fatal accident 82,215 tons were produced. Fifty-five per cent. of the fatal accidents were caused by falls of rock and coal at the "working faces." The condition of the mines at the end of the year was good. The report contains the usual tables of statistics, descriptive tables of accidents a table showing volume of air in circulation, etc.

Respectfully submitted,

EDWARD RODERICK,

Inspector.

SUMMARY OF STATISTICS FOR 1902.

First Anthracite District.

Number of mines in district,	72
Number of mines in operation during 1902,	68
Number of tons of coal produced,	4,932,924
Number of tons shipped to market,	4,357,117
Number of tons sold at mines to local trade,	56,588
Number of tons consumed at mines in generating steam and heat,	519,219
Number of persons employed inside the mines,	13,729
Number of persons employed outside,	4,761
Number of fatal accidents inside the mines,	22

Number of tons produced for each fatal accident inside,	224,224
Number of persons employed per fatal accident inside,	624
Number of fatal accidents outside,	7
Number of persons employed per fatal accident outside,	680
Number of wives made widows by fatal accidents, ..	10
Number of children orphaned by fatal accidents, ...	20
Number of non-fatal accidents inside of mines,	56
Number of persons employed per non-fatal accident inside,	245
Number of non-fatal accidents outside,	4
Number of persons employed per non-fatal accident outside,	1,190
Number of steam locomotives used inside,	47
Number of compressed air locomotives used inside, ..	20
Number of electric motors used inside,	12
Number of fans used for ventilation,	60
Number of gaseous mines in operation during 1902, .	12
Number of non-gaseous mines in operation during 1902,	60

A. Production of Coal During the Year 1902.

Names of Companies.	Tons.
Delaware and Hudson Company,	1,849,892
Delaware, Lackawanna and Western Railroad Company,	382,908
Temple Iron Company,	481,917
Price Pancoast Coal Company,	350,453
Pennsylvania Coal Company,	251,023
Scranton Coal Company,	671,714
Riverside Coal Company,	66,002
Carney & Brown,	43,444
Hillside Coal and Iron Company,	628,371
Dolph Coal Company,	123,224
Mt. Jessup Coal Company,	31,661
Moosic Mountain Coal Company,	26,610
Black Diamond Coal Company,	25,705
Barton Coal Company, local sales,	No report.
Clark Tunnel Coal Company,	Idle.
Total,	4,932,924

B. Showing the number of fatal and non-fatal accidents inside and outside the mines; number of tons of coal produced per fatal and non-fatal accident inside the mines; number of persons employed inside and outside; and the number employed inside and outside for every fatal and non-fatal accident for each company during 1902.

Names of Companies.	Number of lives lost inside		Number of lives lost outside.		Total number of lives lost.		Number severely injured inside.		Number severely injured outside.		Total number severely injured.		Tons of coal produced per each life lost inside.		Tons of coal produced per serious injury inside.		Number employees inside of mines.		Number employees outside of mines.		Total number employed.		Number of employees inside for each life lost.		Number of employees outside for each life lost.		Number of employees outside for each severe injury.		Number of employees outside for each severe injury.	
Delaware and Hudson Co.,	6	2	8	25	3	1	1	1	1	4	25	303,315	73,976	5,160	1,582	6,742	860	2,064	591	1,582	6,742	860	2,064	591	1,582	1,582	2,064	591	1,582	
Delaware, Lacka. and Western R. R. Co.,	6	1	3	7	6	1	1	1	1	4	4	93,818	127,656	1,008	198	1,206	167	345	198	198	1,206	167	345	198	198	345	198	198	198	
Temple Iron Co.,	2	1	2	5	2	1	1	1	1	6	6	240,458	68,845	1,340	277	1,911	466	186	277	277	1,911	466	186	277	277	186	277	277	277	
Price Hancock Coal Co.,	2	1	2	5	2	1	1	1	1	6	6	175,526	70,000	655	277	1,932	466	186	277	277	1,932	466	186	277	277	186	277	277	277	
Pennsylvania Coal Co.,	1	3	4	4	1	1	1	1	1	1	1	125,511	25,011	787	218	1,015	219	219	218	218	1,015	219	219	218	218	219	219	219	219	
Seranton Coal Co.,	1	3	4	4	1	1	1	1	1	1	1	671,714	167,928	2,070	894	2,940	2,070	894	894	894	2,940	2,070	894	894	894	2,940	894	894	894	
Riverside Coal Co.,	1	3	4	4	1	1	1	1	1	1	1	671,714	167,928	2,070	894	2,940	2,070	894	894	894	2,940	2,070	894	894	894	2,940	894	894	894	
Carney & Brown,	2	1	2	6	1	1	1	1	1	7	7	314,185	104,728	1,649	34	127	824	275	516	516	2,165	824	275	516	516	275	516	516	516	
Hillsdale Coal Co.,	2	1	2	6	1	1	1	1	1	7	7	314,185	104,728	1,649	34	127	824	275	516	516	2,165	824	275	516	516	275	516	516	516	
Dolph Coal Co.,	1	1	1	1	1	1	1	1	1	1	1	25,705	26,610	135	213	232	125	219	213	232	125	219	219	213	213	219	219	219	219	
Moosic Mt. Coal Co.,	1	1	1	1	1	1	1	1	1	1	1	31,691	26,610	135	213	232	125	219	213	232	125	219	219	213	213	219	219	219	219	
Black Diamond Coal Co.,	1	1	1	1	1	1	1	1	1	1	1	25,705	26,610	135	58	184	136	136	58	184	136	136	136	136	136	136	136	136	136	
Burton Coal Co.,	1	1	1	2	1	1	1	1	1	2	2	25,705	26,610	135	58	184	136	136	58	184	136	136	136	136	136	136	136	136	136	
Clark Tunnel Coal Co., *	1	1	1	2	1	1	1	1	1	2	2	25,705	26,610	135	58	184	136	136	58	184	136	136	136	136	136	136	136	136	136	
Totals and averages,	22	7	29	56	4	4	4	4	4	60	60	224,224	170,100	13,723	4,761	18,460	624	245	680	4,761	18,460	624	245	680	680	245	680	680	680	

*Idle.

C. Classification of Fatal Accidents for the Year 1902.

Inside of Mines.													Outside of Mines.											
Total.	By Falls of			By mine cars.	By explosion of gas.	Smothered by gas.	Powder and dynamite.	By blasts, etc.	By Falling Into			Crushed at batteries.	By mules.	Suffocated by coal, etc.	Miscellaneous causes.	Total Inside.	By cars.	By machinery.	By suffocation.	By boiler explosions.	Miscellaneous causes.	Total outside.	Grand total.	
	Coal.	Slate.	Roof.						Shafts.	Slopes.	Manways, breasts, etc.													
January	1		1	1			1																1	29
February																								
March	1		1	1																			1	
April																								
May			1	1																			1	
October			1	1																			1	
November	1		1	1																			1	
December			1	1																			1	
Totals	4		12	5			1										22	4	1				1	29
													4 1											

E. Occupations of Employees Killed or Fatally Injured Inside and Outside the Mines of the First Anthracite District during 1902.

Months.	Inside.										Outside.											
	Mine foremen.	Assistant mine foremen.	Fire bosses and assistants.	Miners.	Miners' laborers.	Drivers and runners.	Doorboys and helpers.	Pumpmen.	Company men.	All other employees.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers (boys).	State pickers (men).	Book-keepers and clerks.	All other employees.	Total outside.	Grand total.	
January.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
February.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
March.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
April.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
May.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
June.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
July.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
August.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
September.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
October.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
November.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
December.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Totals.	9	7	5	1	1	1	1	1	1	1	22	1	1	1	2	1	1	1	4	7	29	29

G. Nationality of Employees Killed or Fatally Injured Inside and Outside the Mines During 1902.

	Americans.	English.	Welsh.	Irish.	Poles.	Hungarians.	Slavs.	Lithuanians.	Russians.	Totals.
January,	1	2		1	1	1				3
February,	1					1				3
March,	1						1			2
April,	3				1		1	1	1	7
May,	1							1		2
October,	1	1	1			1	1			5
November,	3	1								4
December,										
Total,	12	4	1	1	3	2	3	2	1	24

H. Nationality of Employees Severely Injured Inside and Outside the Mines During 1902.

	Americans.	English.	Welsh.	Irish.	Germans.	Poles.	Hungarians.	Italians.	Slavs.	Russians.	Swedes.	Totals.
January,	2			1				1	1	1		6
February,	3					1	1					6
March,	3	1	1	1			1	1	2			9
April,	4	1	1	1	1	1		1				13
May,	3	3	1	1		1			1			9
November,	3		3			2			4		1	13
December,	3					1			1			5
Total,	17	6	5	4	1	6	2	3	11	1	1	60

I. (giving names of operators and mines, kind of openings, type and size of fans; size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number employed inside, and quantity of air produced for each employee per minute in the mines of First Anthracite District for the year 1902.

Names of Operators and Mines.	Kind of opening.	Gaseous or non-gaseous.	Method of ventilation.	Diameter and width of fan in feet.	Water gauge developed—in inches.	Name of fan.	Power used.	Area of furnace bars in square feet.	Number of air splits of air currents.	Number of cubic feet of air per minute entering the mine at inlet.	Total quantity of air per minute circulating in all the splits in cubic feet.	Number of cubic feet per minute passing out at outlet.	Number of persons employed inside.	Average number of cubic feet per minute provided for each person.
Temple Iron Co.														
Lackawanna.	Shaft.	Gaseous.	Fan.	20	2	Guibal.	Steam.		4	85,835	70,025	90,000	235	383
Lackawanna.	Tunnel.	Non-gas.	Fan.	18	2.2	Guibal.	Steam.		2	52,230	48,000	53,110	65	817
Sterrick Creek.	Shaft.	Non-gas.	Fan.	16	.8	Guibal.	Steam.		1	31,440	22,635	33,600	71	302
Edgerton.	Drifts.	Non-gas.	Fan.	16		Guibal.	Steam.		1	11,700	10,600	12,700	107	178
Edgerton.*	Drifts.	Non-gas.	Natural.											
Simpson.	Slope.	Non-gas.	Fan.	16		Guibal.	Steam.		3	103,340	99,880	110,336	133	829
Prior-Panecost Coal Co.														
Panecost.	Shaft.	Gaseous.	Fan.	35	1.9	Guibal.	Steam.		6	119,426	102,073	129,718	361	369
Panecost.	Shaft.	Gaseous.	Fan.	35	1.9	Guibal.	Steam.		4	61,634	54,320	72,216	193	376
Pennsylvania Coal Co.														
No. 1.	Shaft.	Gaseous.	Fan.	18	.7	Guibal.	Steam.		6	101,740	73,450	103,190	212	486
No. 2.	Shaft.	Non-gas.	Fan.	18	.3	Guibal.	Steam.		2	28,170	24,770	29,800	106	281
Wilsey Grove.	Shaft.	Non-gas.	Fan.	18	1	Guibal.	Steam.		6	75,200	65,000	75,200	242	310
Scranton Coal Co.														
Johnsons No. 1.	Shaft.	Gaseous.	Fan.	30	1.3	Guibal.	Steam.		10	169,000	86,100	169,900	374	726
Johnsons No. 2.	Slope.	Non-gas.	Fan.	18	1.7	Guibal.	Steam.		4	59,700	40,875	71,950	228	315
Raymond.	Shaft.	Non-gas.	Fan.	18	.5	Guibal.	Steam.		6	85,700	76,950	93,625	377	248
Delaware and Hudson Co.														
Laggett's Creek No. 1.	Shaft.	Gaseous.	Fan.	20	1.1	Guibal.	Steam.		5	232,760	118,080	213,960	149	1,450
Laggett's Creek, Clark vein.	Shaft.	Gaseous.	Fan.	20	1.3	Guibal.	Steam.		4	101,580	95,870	116,390	64	2,138
Laggett's Creek No. 2.	Shaft.	Gaseous.	Fan.	20	1.9	Guibal.	Steam.		2	195,300	171,000	223,600	139	1,609

*Robbing pillars.

I—Continued

Name of Operators and Mines.	Kind of opening.	Gasous or non-gaseous.	Method of ventilation.	Diameter and width of fan in feet.	Water gauge developed—in inches.	Name of fan.	Power used.	Area of furnace bars in square feet.	Number of air splits of air currents.	Number of cubic feet of air per minute entering the mine at inlet.	Total quantity of air per minute circulating in all the splits in cubic feet.	Number of cubic feet per minute passing out at outlet.	Number of persons employed inside.	Average number of cubic feet per minute provided for each person.
Marvine, Fourteen-foot Vein,	Shaft,	Gasous,	Fan,	20	1.4	Guibal,	Steam, .....	.....	6	255,810	229,795	284,040	2.5	1,081
Marvine, Clark Vein,	Shaft,	Gasous,	Fan,	20	1.4	Guibal,	Steam, .....	.....	2	182,385	165,455	201,545	138	1,461
Olyphant,	Shaft,	Gasous,	Fan,	20	2	Guibal,	Steam, .....	.....	2	134,680	135,600	167,975	26	1,585
Eddy Creek, "Birds Eye,"	Drift,	Non-gas,	Fan,	12	1	Guibal,	Gasoline, .....	.....	2	44,600	58,740	64,150	24	1,582
Grassy Island,	Shaft & slope,	Non-gas,	Fan,	20-16	.....	Guibal,	Steam, .....	.....	9	191,800	179,200	230,700	3.6	.....
White Oak,	Shaft,	Non-gas,	Fan,	16	1	Guibal,	Steam, .....	.....	7	135,960	76,900	145,500	440	350
Jermyn,	Drift & slope,	Non-gas,	Nat. Fan,	16	1	Guibal,	Steam, .....	.....	7	91,112	79,468	100,560	287	350
Powderly,	Drift & slope,	Non-gas,	Natural, .....	.....	.....	.....	.....	.....	8	118,040	107,060	129,040	283	455
No. 1,	Drift & slope,	Non-gas,	Fan,	17	.....	Guibal,	Steam, .....	.....	4	55,200	53,830	57,780	162	37.6
Coal Brook,	Drifts,	Non-gas,	Fan,	24	1.6	Guibal,	Steam, .....	.....	7	85,870	81,270	91,180	301	20.3
Clinton,	Slope,	Non-gas,	Fan,	17	1.1	Guibal,	Steam, .....	.....	4	81,338	81,021	84,558	226	358
Clinton,	Slope No. 2,	Non-gas,	Fan,	10	.38	Guibal,	Gasoline, .....	.....	4	85,254	83,06	86,462	240	36
Del. Lack'a and West. R. R. Co.	Shaft,	Gasous,	Fan,	16	1.4	Guibal,	Steam, .....	.....	7	111,917	87,615	128,641	280	459
Storia No. 1,	Shaft,	Gasous,	Fan,	16	.9	Guibal,	Steam, .....	.....	10	93,295	130,065	171,244	293	681
Storia No. 2,	Shaft,	Gasous,	Fan,	16	.85	Guibal,	Steam, .....	.....	8	244,170	190,900	282,190	258	1,189
Hillside Coal and Iron Co.	Drifts,	Non-gas,	Natural,	12	.....	Guibal,	Steam, .....	.....	2	87,280	85,120	64,000	88	727
Keystone,	Shaft,	Non-gas,	Fan,	14	.....	Guibal,	Steam, .....	.....	6	70,537	71,008	72,549	310	224
Erle,	Slope,	Non-gas,	Fan,	14	.....	Guibal,	Steam, .....	.....	6	77,090	71,800	81,750	248	329
Glennwood,	Shaft,	Non-gas,	Fan,	16	.....	Guibal,	Steam, .....	.....	7	95,093	88,454	103,147	423	2.3
Forest City shaft,	Shaft,	Non-gas,	Fan,	16	.....	Guibal,	Steam, .....	.....	5	146,720	20,840	57,800	213	2.1
Clifford,	Drift,	Non-gas,	Fan,	16	.....	Guibal,	Steam, .....	.....	3	101,780	90,080	90,875	167	636
Dolph,	Slope,	Non-gas,	Fan,	24	.....	Guibal,	Steam, .....	.....	5	45,284	40,781	46,815	157	251
Dolph Coal Co.	Drift,	Non-gas,	Fan,	16	.....	Guibal,	Steam, .....	.....	3	101,780	90,080	90,875	167	636
Hannah Bell,	Slope,	Non-gas,	Fan,	24	.....	Guibal,	Steam, .....	.....	5	45,284	40,781	46,815	157	251

*Robbing pillars.

†Robbing pillars; air not measured

The annual examination of applicants for mine foreman and assistant mine foreman certificates of qualification was held at Carbondale on August 4 and 5.

The board consisted of Edward Roderick, Inspector, Scranton; M. G. Robertson, Superintendent, Jessup; Joseph T. Roberts, Jermyn, and Thomas Llewellyn, Peckville.

The following named persons were recommended to receive mine foreman certificates: John E. Jones, Scranton; William R. Jones, Olyphant; George R. Mason, Olyphant; William H. Himmelreich, Olyphant; John R. Pettigrew, Olyphant; Charles H. Robinson, Olyphant; Michael Moran, Olyphant; David McElroy, Olyphant; William E. Griffith, Jermyn; John B. Jones, Jermyn; Edward H. Stahl, Scranton; Frank Igo, Scranton; John M. Jehu, Scranton; William Davison, Scranton; John R. Thomas, Scranton, William J. Thomas, Taylor; Frank A. Gleason, Dickson, and John H. Robertson, Old Forge.

The following were recommended to receive assistant mine foreman certificates of qualification:

Morgan E. Griffith, Taylor; George Knight, Olyphant; Richard O. Lloyd, Scranton; Thomas J. Richards, Scranton; John W. Proudlick, Scranton; George Hall, Scranton; Edward Gleason, Scranton; John R. Howells, Scranton; John Phillips, Scranton; Thomas Laird, Scranton; Frank McHale, Scranton; Thomas H. Lewis, Scranton; Sylvester Foster, Scranton; Benjamin Davis, Scranton; William H. Freize, Scranton; David A. Jones, Scranton; Henry E. Jones, Scranton; Thomas Lewis, Scranton; John H. Phillips, Scranton; John Ward, Scranton; James Jones, Scranton; David E. Evans, Scranton; Alfred Pierce, Scranton; Evan Phillips, Scranton; Alfred Pugh, Scranton; William J. Lewis, Scranton; David M. Morgan, Scranton; Joseph Williams, ———; Henry G. Williams, Scranton; James W. Nichols, Olyphant; Edward M. Hoban, Olyphant; Rees Maggs, Olyphant; Michael J. McGlaughlin, Olyphant; Samuel J. Lewis, Olyphant; Francis J. Kearney, Archbald; Patrick McAuvie, Archbald; John J. Barrett, Archbald, and John Durkin, Archbald.

TABLE I—Showing names of operators, railroads, etc., and location of collieries in the First Anthracite District for the year 1902.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Delaware and Hudson Co. Leggitts Creek washery	Lackawanna.	C. C. Rose.	Scranton.	J. L. Atherton.	Scranton.	Delaware and Hudson.
Marvine.	Lackawanna.	C. C. Rose.	Scranton.	J. L. Atherton.	Scranton.	Delaware and Hudson.
Grassy Island.	Lackawanna.	C. C. Rose.	Scranton.	J. L. Atherton.	Scranton.	Delaware and Hudson.
Opphant.	Lackawanna.	C. C. Rose.	Scranton.	J. L. Atherton.	Scranton.	Delaware and Hudson.
Eddy Creek.	Lackawanna.	C. C. Rose.	Scranton.	J. L. Atherton.	Scranton.	Delaware and Hudson.
White Oak.	Lackawanna.	C. C. Rose.	Scranton.	J. L. Atherton.	Scranton.	Delaware and Hudson.
Jermyn.	Lackawanna.	C. C. Rose.	Scranton.	J. L. Atherton.	Scranton.	Delaware and Hudson.
Powderly.	Lackawanna.	C. C. Rose.	Scranton.	J. L. Atherton.	Scranton.	Delaware and Hudson.
No. 1.	Lackawanna.	C. C. Rose.	Scranton.	J. L. Atherton.	Scranton.	Delaware and Hudson.
Coal Brook.	Lackawanna.	C. C. Rose.	Scranton.	J. L. Atherton.	Scranton.	Delaware and Hudson.
Clinton.	Lackawanna.	C. C. Rose.	Scranton.	J. L. Atherton.	Scranton.	Delaware and Hudson.
Racket Brook washery.	Lackawanna.	C. C. Rose.	Scranton.	J. L. Atherton.	Scranton.	Delaware and Hudson.
Grassy Island.	Lackawanna.	C. C. Rose.	Scranton.	J. L. Atherton.	Scranton.	Delaware and Hudson.
Del., Lack. & W. R. R. Co. Storrs.	Lackawanna.	R. A. Phillips.	Scranton.	H. G. Davis.	Scranton.	Del., Lack. & Western.
Temple Iron Co. North West.	Lackawanna.	S. B. Thorne.	Scranton.	Frank Hemelright.	Jermyn.	D. & H. and Erie.
Edgerton.	Lackawanna.	S. B. Thorne.	Scranton.	John J. Aitken.	Scranton.	D. & H. and Erie.
Sterrick Creek.	Lackawanna.	S. B. Thorne.	Scranton.	John J. Aitken.	Scranton.	D. & H. and Erie.
Lackawanna.	Lackawanna.	S. B. Thorne.	Scranton.	John J. Aitken.	Scranton.	D. & H. and Erie.
Price Pancoast Coal Co. Pancoast.	Lackawanna.	John R. Bryden.	Scranton.	John J. Aitken.	Priceburg.	D., L. & W., and O. and W.
Pancoast washery.	Lackawanna.	John R. Bryden.	Scranton.	John J. Aitken.	Priceburg.	D., L. & W., and O. and W.
Pennsylvania Coal Co. Gipsy Grove.	Lackawanna.	W. A. May.	Scranton.	James Young.	Dunmore.	Erie.
No. 1.	Lackawanna.	W. A. May.	Scranton.	James Young.	Dunmore.	Erie.
Scranton Coal Co. Richmond No. 3.	Lackawanna.	John R. Bryden.	Scranton.	John J. Aitken.	Priceburg.	Ontario and Western
Johnsons.	Lackawanna.	John R. Bryden.	Scranton.	John J. Aitken.	Priceburg.	Ontario and Western
Ontario.	Lackawanna.	John R. Bryden.	Scranton.	John J. Aitken.	Priceburg.	Ontario and Western
Raymond.	Lackawanna.	John R. Bryden.	Scranton.	John J. Aitken.	Priceburg.	Ontario and Western
Raymond washery.	Lackawanna.	John R. Bryden.	Scranton.	John J. Aitken.	Priceburg.	Ontario and Western
Richmond No. 4.	Lackawanna.	John R. Bryden.	Scranton.	John J. Aitken.	Priceburg.	Ontario and Western

TABLE I—Continued.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Riverside Coal Co. Riverside,	Lackawanna.	J. M. Rice,	Scranton,	Eugene Taylor,	Peckville,	Ontario and Western.
Carney & Brown. Murrays,	Lackawanna.	John Carney,	Dunmore, .....	.....	.....	Del., Lack. & Western.
Hillside Coal and Iron Co. Clifford	Susquehanna.	V. L. Peterson, ..	Scranton,	S. J. Jennings,	Forest City,	Erie.
Forest City,	Susquehanna.	V. L. Peterson, ..	Scranton,	S. J. Jennings,	Forest City,	Erie.
Erie	Lackawanna.	V. L. Peterson, ..	Scranton,	John F. Gallagher, ..	Mayfield,	Erie.
Keystone,	Lackawanna.	V. L. Peterson, ..	Scranton,	John F. Gallagher, ..	Mayfield,	Erie.
Glenwood,	Lackawanna.	V. L. Peterson, ..	Scranton,	John F. Gallagher, ..	Mayfield,	Erie.
Glenwood washery,	Lackawanna.	V. L. Peterson, ..	Scranton,	John F. Gallagher, ..	Mayfield,	Erie.
Dolph Coal Co. Dolph,	Lackawanna.	W. G. Robertson, ..	Jessup, .....	.....	.....	Erie.
Mt. Jessup Coal Co. Mt. Jessup,	Lackawanna.	Chas. P. Ford,	Winton, .....	.....	.....	D., L. & W., and Erie and O. & W.
Moosic Mountain Coal Co. Moosic Mountain,	Lackawanna.	Chas. P. Ford,	Winton, .....	.....	.....	D., L. & W., and Erie and O. & W.
Black Diamond Coal Co. Black Diamond,	Lackawanna.	W. G. Thomas, ..	West Pittston,	G. J. Thomas,	Carbondale,	Ontario and Western.
Barton Coal Co. Barton,	Lackawanna.	W. L. Barton,	Carbondale, .....	.....	.....	Local sales.
Clark Tunnel Coal Co. Clark Tunnel,	Lackawanna.	Morgan Davis,	Scranton, .....	.....	.....	.....

TABLE II.—Gives the total number of tons of coal mined in each colliery, number of days worked, number of employees, number of employees killed and injured, number of kegs of powder, etc., used in the First Anthracite District for the year ending December 31, 1902.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Delaware and Hudson Co.												
Leggett's Creek,	Lackawanna,	147,759	38,056	4,275	190,000	121.75	687	1	9	6,990	3,553	55
Marvino,	Lackawanna,	3,262	22,125	2,335	5,377	11	24	1	5	6,521	1,719	63
Grassy Island,	Lackawanna,	176,592	42,011	5,272	200,942	143.25	676	1	5	4,009	2,611	42
Olyphant,	Lackawanna,	296,933	10,113	5,104	284,929	135	425	1	1	5,604	1,812	47
White Oak,	Lackawanna,	1,313	34	948	13,348	125.25	637	2	2	6,346	1,770	57
Pawley,	Lackawanna,	185,841	14,812	3,007	87,723	18.50	494	1	1	1,228	5,576	55
Clinton,	Lackawanna,	149,222	13,599	3,007	167,021	14.25	596	2	1	3,605	350	61
No. 1,	Lackawanna,	37,099	13,592	401	51,958	117.25	341	1	1	1,318	1,232	41
Coal Brook,	Lackawanna,	21,377	7	1	34,879	71.75	401	1	2	3,249	3,249	74
Clinton,	Lackawanna,	302,600	20,320	1,425	309,600	135.25	955	2	1	7,754	19,475	63
Racket Brook washery,	Lackawanna,	192,373	4,900	1	214,884	131.50	679	30	1	.....	.....	.....
Grassy Island washery,	Lackawanna,	51,577	4,100	.....	61,467	232.5	51	.....	.....	.....	.....	.....
Totals,		91,584	192,797	17,328	95,694	206.5	5	8	24	52,919	42,085	610
Delaware, Lack. & Western R. Co.		1,639,767	192,797	17,328	1,849,892	127.8	6,656	8	4	.....	.....	.....
Storrs,	Lackawanna,	353,846	26,576	2,486	382,908	133.8	1,206	6	4	14,740	4,024	144
Temple Iron Co.												
North West,	Lackawanna,	17,039	2,919	49	20,086	37.5	355	.....	.....	455	175	67
Richmond,	Lackawanna,	132,574	8,015	270	141,039	19.8	375	1	1	2,771	150	53
Sterrick Creek,	Lackawanna,	161,217	18,123	1,037	180,377	115.3	720	2	5	5,876	11,620	81
Lackawanna,	Lackawanna,	102,081	32,543	2,751	137,385	111.9	553	1	2	3,740	882	76
Totals,		416,110	61,770	4,107	481,917	102.8	1,913	3	8	12,842	12,827	277

*Totals in this column are averages.

TABLE II—Continued.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Price Hancock Coal Co.		170,479	25,500	1,686	137,665	154	871	2	5	8,552	6,750	88
Panocast,	Lackawanna,	152,788			152,788	156	51		1			
Panocast washery,	Lackawanna,											
Totals,		323,267	25,500	1,686	350,453	155	926	2	6	8,552	6,750	88
Pennsylvania Coal Co.												
Gipey Grove,	Lackawanna,	93,577	1,801		95,378	124.6	360		1	3,466	790	40
No. 1,	Lackawanna,	148,462	7,243		155,645	124.7	645		1	6,892	1,412	47
Totals,		241,979	9,044		251,023	124.65	1,005		2	10,358	2,202	86
Scranton Coal Co.												
Richmond No. 3,	Lackawanna,	13,293	6,488	81	19,772	36.4	231		1	775	300	18
Johns,	Lackawanna,	134,768	2,488	2,488	219,024	130.6	864		3	6,273	10,350	98
Ottum,	Lackawanna,	114,035	23,750	478	138,961	135.8	874	2	1	3,767	24,100	87
Raymond,	Lackawanna,	139,508	12,660	771	152,879	115.8	689			4,567	5,369	31
Raymond washery,	Lackawanna,	121,610	4,000	759	136,339	124.5	63	1				
Richmond No. 4,	Lackawanna,	12,006	4,380	453	16,839	50.1	160			600	1,000	30
Totals,		583,798	81,213	6,698	671,714	95.1	2,964	4	5	17,990	41,339	251
Riverside Coal Co.												
Riverside,	Lackawanna,	58,206	7,320	476	66,002	111.6	285		1	2,249	250	26
Murrays,												
Carney & Brown,	Lackawanna,	35,275	60	8,109	43,444	130	127			1,625	93	23
Hillside Coal and Iron Co.												
Clifford,	Susquehanna,	193,096	6,048	1,543	195,390	110.15	470	1		4,451	3,562	44
Forest City,	Susquehanna,	23,358	1,985	2,241	298,888	153.7	916	2		10,311	8,688	76
Eme,	Lackawanna,	82,968	12,132	2,715	97,815	111.35	413		2	2,772	5,527	49

*Totals in this column are averages.

Keystone,	Lackawanna,	34,494	810	.....	35,304	104.85	.....	714	110	17
Glenwood,	Lackawanna,	36,717	22,831	.....	59,548	61.3	.....	969	788	26
Glenwood washery,	Lackawanna,	28,990	2,467	.....	31,456	201.	.....	1	.....	.....
Totals, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dolph Coal Co., .....	.....	556,620	59,244	12,507	628,371	123.5	.....	19,247	12,675	212
Dolph,	Lackawanna,	101,715	19,000	918	121,633	115.1	.....	3,896	2,400	48
Dolph washery,	Lackawanna,	1,591	.....	.....	1,591	.....	.....	.....	.....	.....
Totals, .....	.....	103,306	19,000	918	123,224	115.1	.....	3,896	2,400	48
Mt. Jessup Coal Co.,	Lackawanna,	6,369	25,000	292	31,661	41.3	.....	204	1,503	30
Moosic Mountain Coal Co.,	Lackawanna,	17,089	8,760	761	25,610	38.4	.....	1	250	61
Black Diamond,	Lackawanna,	21,485	3,000	1,220	25,705	96.2	.....	1,203	1,400	20
Clark Tunnel Coal Co.,	Lackawanna, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Clark Tunnel,	Lackawanna, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grand Totals, .....	.....	4,857,117	519,219	56,588	4,932,924	115.28	.....	146,550	127,798	1,856

*Totals in this column are averages.

TABLE II—Continued.

Names of Operators and Collieries.	County.	Number of boilers.			Total horse power.		Locomotives.			Number steam engines of all classes.		Total horse power.	Number pumps delivering water to surface.	Capacity in gallons per minute.	Quantity delivered to surface per minute—gallons.	Number electric dynamos.	Number air compressors.
		Cylindrical.	Horse power.	Tubular.	Horse power.	Steam.	Air.	Electric.									
Delaware and Hudson Co.,	Lackawanna.	164	2,900	35	674	11	20	211	12,675	41	35,635	23,775	1	8			
Delaware, Lack and Western R. R. Co., ..	Lackawanna.	12	540	11	1,380	4	.....	26	1,860	2	2,100	1,150	1	3		
Temple Iron Co.,	Lackawanna.	52	2,040	12	1,820	12	.....	37	3,330	11	8,650	5,872	2	1		
Price Paper and Coal Co.,	Lackawanna.	12	240	6	199	2	.....	31	1,546	2	1,200	800	2	1		
Pennsylvania Coal Co.,	Lackawanna.	41	1,000	7	190	2	.....	31	1,416	7	4,326	1,100	5	3		
Sheridan Coal Co.,	Lackawanna.	41	1,000	38	3,955	8	.....	6	5,920	22	13,582	9,704	5	3		
Riverside Coal Co.,	Lackawanna.	9	1,180	5	400	580	.....	12	898	2	1,750	800	.....	.....	
Delaware, Lack and Iron Co.,	Lackawanna.	25	470	35	2,875	270	.....	4	115	22	1,778	9,195	7	.....		
Hillsdale Coal and Iron Co.,	Lackawanna.	4	220	7	985	4	.....	6	3,465	3	970	260	1	2		
Delph Coal Co.,	Lackawanna.	20	500	9	675	1	.....	13	761	7	3,400	2,600	.....	.....	
Mt. Jessup Coal Co.,	Lackawanna.	10	400	1	50	1	.....	12	700	2	800	450	.....	.....	
Moosie Mountain Coal Co.,	Lackawanna.	3	270	270	2	50	
Black Diamond Coal Co.,	Lackawanna.	
Clark Tunnel Coal Co.,	Lackawanna.	
Grand totals,		356	8,844	169	21,024	47	2	503	32,877	124	84,360	55,446	18	24			

TABLE III—Showing the number of employees at each colliery in the First Anthracite District during the year 1902.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.										Occupation of Persons Employed Outside.								Grand total inside and outside.		
		Occupations of Persons Employed Inside.										Occupation of Persons Employed Outside.										
		Mine foremen.	Assistant mine foremen.	Fire bosses and assistants.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	Pumpmen.	Company men.	All other employees.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers (boys).	State pickers (men).	Book-keepers and clerks.		All other employees.	Total outside.
Delaware and Hudson Co.	Lackawanna.	1	1	6	152	132	42	17	6	71	13	525	1	1	7	24	48	1	1	80	171	637
Leggitts Creek.	Lackawanna.	2	1	8	132	132	94	34	2	9	5	542	1	1	8	14	42	14	55	18	27	676
Marvine.	Lackawanna.	1	2	2	130	145	48	5	.....	27	.....	365	.....	.....	.....	.....	.....	.....	.....	55	131	425
Grassy Island.	Lackawanna.	1	1	3	140	156	59	10	3	31	4	4	.....	.....	.....	.....	.....	.....	.....	76	10	603
Eddy Creek.	Lackawanna.	1	2	4	164	188	81	12	3	32	12	4	.....	.....	.....	.....	.....	.....	.....	70	139	637
White Oak.	Lackawanna.	1	2	3	151	123	59	2	.....	23	12	3	.....	.....	.....	.....	.....	.....	.....	68	116	489
Jermyn.	Lackawanna.	1	1	1	145	229	60	20	2	31	21	510	.....	.....	.....	.....	.....	.....	.....	31	40	591
Powderly.	Lackawanna.	1	1	1	204	7	45	4	2	20	11	291	.....	.....	.....	.....	.....	.....	.....	49	75	484
No. 1.	Lackawanna.	1	2	.....	303	18	41	6	2	20	11	409	.....	.....	.....	.....	.....	.....	.....	110	230	95
Coal Brook.	Lackawanna.	1	4	.....	334	208	75	31	2	35	31	715	.....	.....	.....	.....	.....	.....	.....	77	164	679
Clinton.	Lackawanna.	1	3	.....	186	199	66	20	4	21	15	515	.....	.....	.....	.....	.....	.....	.....	22	30	37
Racket Brook washery.	Lackawanna.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	53
Grassy Island washery.	Lackawanna.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	53
Totals.	.....	12	10	23	2,86	1,607	670	165	21	413	179	5,160	.....	13	70	133	307	238	6	775	1,58	6,742
Dela., Lack. & West. R. R. Co.	Lackawanna.	3	2	7	342	355	115	21	6	146	11	1,008	1	1	12	15	66	10	3	90	198	1,206
Storrie.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Temple Iron Co.	Lackawanna.	1	1	.....	82	80	29	8	3	11	3	218	1	1	7	10	18	25	2	53	117	305
North West.	Lackawanna.	2	.....	.....	56	80	24	1	.....	9	4	186	1	1	9	10	10	10	.....	.....	.....	305
Edgerton.	Lackawanna.	2	2	1	202	117	75	16	4	3	3	538	1	1	10	16	54	22	2	98	182	770
Sterrick Creek.	Lackawanna.	2	2	1	135	117	68	11	8	43	8	398	1	1	7	13	42	.....	6	58	155	553
Lackawanna.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals.	.....	7	3	2	435	450	196	56	15	98	48	1,740	4	4	33	54	13	53	8	261	573	1,973

TABLE IV—List of fatal accidents that occurred in and about the mines of the First Anthracite District for the year ending December 31, 1902.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan. 9	Bernard Loftus,	Irish,	Miner,	58	M.	.....	.....	Sterrick Creek, ...	Lackawanna.	He was caught by a fall of rock at the face of his chamber while he was getting ready to drill a hole.
16	Henry Willen,	Polish,	Miner,	36	M	1	4	Storrs No. 2,	Lackawanna.	While mining out a piece of bottom coal a piece of top coal fell on him.
21	George Savage,	Hungarian, ..	Driver, ...	16	S.	.....	.....	Pancoast,	Lackawanna.	While driving a mule he tumbled to a load and he fell under the car.
Feb. 7	George Dally,	English,	Miner,	27	M	1	1	Olyphant,	Lackawanna	He was using dynamite by placing his hands on the surface of a tin powder keg in which the dynamite was placed, when it exploded and killed him.
7	Thomas H. Murphey,	American,	Miner,	29	S	.....	.....	White Oak,	Lackawanna.	While drilling a hole at the face of his chamber a piece of roof fell and fatally injured him. He and his laborer had tried to pull the piece down on the preceding day but failed, then a prop was placed, as they supposed, under it, but as was later discovered, had been placed inside of a break in the roof.
20	Albert W. Ware,	English,	Driver,	19	S.	.....	.....	Storrs No. 1,	Lackawanna.	He undertook to get on the bumper of a moving car and fell under it.
March 5	Andrew Lee,	American, ..	Statepicker	14	S.	.....	.....	Jermyn,	Lackawanna,	While pushing coal in a chute he was thrown from the chute.
6	Frank H. Filarski,	Polish,	Miner,	28	M	1	2	Johnsons No. 2, ...	Lackawanna,	After putting a block of timber, which did not fit, in the roadway, he passed under the roof to push out a car, and while so doing a slab fell on him.
22	Owen McHugh,	American, ..	Timberman	38	M	1	5	Clark Tunnel,	Lackawanna,	While re-timbering a gangway, a fall of coal and rock occurred, which instantly killed him.
April 3	John Polko,	Slavonic,	Driver, ...	16	S.	.....	.....	Edgerton,	Lackawanna.	While driving a team of mules hitched to empty cars, a trip of loaded cars came out and crushed him.

TABLE IV--Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
26	William Snyder,	American,	Miner,	29	M.	1	.....	Black Diamond, ..	Lackawanna,	While barring down coal at the face of the shaft, a piece of rock fell on him, causing injuries from which he died in a short time.
May	Michael Gorham,	Slavonic,	Laborer,	24	S.	.....	.....	Eddy Creek,	Lackawanna,	While heading a car at the face, a "bell" of rock fell from an otherwise safe roof and killed him.
3	Joseph Mitchell,	Lithuanian,	Laborer, ..	27	M.	1	.....	Storrs No. 3,	Lackawanna,	Killed by a fall of "saddle rock" from a sand rock roof.
3	Michael Manley,	American, ..	Driver,	21	S.	.....	.....	Mt. Jessup,	Lackawanna,	While riding up a slope on a trip, the front car jumped the track and he fell, and two cars passed over him.
3	James Scanlon,	American, ..	Fireman, ..	30	S.	.....	.....	Leggitts Creek, ...	Lackawanna,	While cooling the flues, water was forced in and transformed into steam, which exploded, burning fireman so severely that he died.
7	Peter Coninski,	Russian,	Footman, ..	25	S.	.....	.....	Johnsons,	Lackawanna,	While putting cars on at foot of breaker tower, the headman gave signal too soon and cars were taken away before car was properly on, and caught him.
9	William Lucas,	Polish,	Miner,	28	M.	1	3	Storrs No. 2,	Lackawanna,	When drilling a hole in bottom coal, a piece of middle rock fell on him.
11	Thomas Kemmerer,	American, ..	Fireman, ..	35	M.	1	1	Ontario,	Lackawanna,	Breaker burned on Sunday and on Monday his remains were found in the ruins.
Oct.	Robert Dunn,	American, ..	Footman, ..	67	M.	1	.....	Forest City,	Susquehanna,	Attempted to uncouple cars while they were in motion at foot of plane, and his head was crushed.
20	Anth. Shotunis,	Lithuanian, ..	Laborer,	21	S.	.....	.....	Clifford,	Susquehanna,	While shoveling coal at face of chamber, a "bell" rock fell on him.
Nov.	Michael Cavallo,	Slavonic,	Laborer,	15	S.	.....	.....	Sterrick Creek, ...	Lackawanna,	While the cover on rolls was temporarily removed, by some person unknown, the man's head fell into them and was instantly killed.

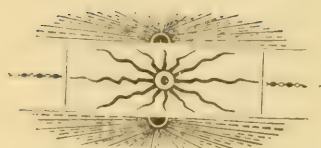
Nov.	7	Alfred Chamber,	English,	Miner,	57	S.	Forest City,	Susquehanna,	While mining out loose coal after a shot, a small piece of top coal fell on him, causing injuries from which he died on the 12th.
	23	Benjamin Jones,	Welsh,	Miner,	56	M.	Storrs No. 3,	Lackawanna,	He had just fired a shot which displaced a prop, which he was replacing, when a slab of rock fell on him.
	23	George King,	American,	Runner,	18	S.	Grassy Island,	Lackawanna,	While standing near the face of a chamber waiting for the men to load their car, a piece of rock fell on him, causing injuries from which he died on the following day.
	29	John Moritz,	Hungarian,	Miner,	36	S.	Pancoast,	Lackawanna,	Just after firing a blast he went back to face to see results, when a large mass of rock fell on him.
Dec.	1	Patrick Fadden,	American,	Miner,	21	S.	Birds Eye, Eddy Creek,	Lackawanna,	While working out loose coal after a blast, a portion of the overhanging top coal fell on him, causing fatal injuries.
	5	William McHale,	American,	Switchman,	17	S.	Raymond washery	Lackawanna,	Squeezed between car and locomotive; was riding on front end of latter when car jumped the track.
	17	William Rains,	English,	Laborer,	24	S.	Storrs No. 1,	Lackawanna,	While standing near a prop which his miner was wedging, a bell of rock fell on him. He died twelve hours later.
	31	John Cunningham,	American,	Doorboy,	21	S.	Jernyn,	Lackawanna,	While making his trip of cars in some way was struck by trip of cars that was slowly passing through, and crushed to death.

TABLE V.—List of non-fatal accidents that occurred in and about the mines of the First Anthracite District for the year ending December 31, 1902.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan.	James O'Malley,	Irish,	Pump runner,	30	S.	Olyphant,	Lackawanna,	Injured by cage falling in shaft.
12	Valdage, W. Vort,	Italian,	Laborer,	10	M.	Ontario,	Lackawanna,	Arm fractured by falling from cage.
17	Robert Stewart,	American,	Driver,	16	S.	Marvine,	La kawanna,	Arm fractured by fall of rock.
20	John Lucas,	Slavonic,	Laborer,	25	M.	Forest City,	Susquehanna,	Foot fractured by fall of rock.
24	John Amos's,	American,	Driver,	17	S.	Leggetts Creek,	Lackawanna,	Leg fractured by cars.
29	Alex. Pawlick,	Russian,	Miner,	42	M.	Erie,	Lackawanna,	Back and leg bruised by falling rock.
Feb.	Joseph Roman,	Polish,	Door boy,	14	M.	Forest City,	Susquehanna,	Arm fractured, kicked by a mule.
5	Michael Re-bels,	Hungarian,	Miner,	36	M.	Leggetts Creek,	La kawanna,	Leg and arm fractured by fall of rock.
6	Thomas Price,	American,	Brakeman,	19	S.	Leggetts Creek,	Lackawanna,	Leg severely cut by falling stick by cars.
10	Thomas Rawley,	American,	Laborer,	30	S.	Clark's Tunnel,	Lackawanna,	Severely injured by a fall of rock.
27	David Lewis,	Welsh,	Miner,	32	M.	Grassy Island,	Lackawanna,	Leg fractured by a fall of coal.
28	Jerry Gerry,	American,	Doerby,	28	S.	Marvine, washery,	Lackawanna,	Leg fractured, struck by a car.
March	John Lighter,	Hungarian,	Laborer,	23	S.	Riverside,	Lackawanna,	Arm crushed by machinery.
11	Joe Loge,	Italian,	Laborer,	28	S.	Leggetts Creek,	Lackawanna,	Head cut by fall of coal.
12	Pat Convery,	Irish,	Miner,	38	M.	Leggetts Creek,	Lackawanna,	Leg fractured by a prop falling on it.
14	David J. Smith,	Welsh,	Miner,	31	M.	Leggetts Creek,	Lackawanna,	Back severely injured by a falling rock.
22	William P. Smith,	American,	Driver,	16	S.	Marvine,	Lackawanna,	Nose fractured: kicked by a mule.
23	Craddock Morris,	American,	Timberman,	38	M.	Clark Tunnel,	Lackawanna,	Severely injured by a fall of coal.
25	John Hizen,	Slavonic,	Miner,	41	M.	No. 2 shaft, No. 1 colliery,	Lackawanna,	Back bruised by a fall of coal.
April	John Brooks,	English,	Miner,	21	M.	Grassy Island,	Lackawanna,	Thigh fractured by a fall of coal.
27	Stanley Miller,	Slavonic,	Footman,	15	M.	Forest City,	Susquehanna,	Leg fractured by cars.
2	Andrew Dubish,	Slavonic,	Footman,	26	M.	Sterrick Creek,	Lackawanna,	Leg fractured by fall of rock.
3	Thomas Simpson,	English,	Miner,	41	M.	Marvine,	Lackawanna,	Leg fractured by flying coal from a blast
6	John Moritz,	Slavonic,	Miner,	32	S.	Pancoat,	Lackawanna,	Badly injured by flying coal from a blast
10	Michael Chapman,	Italian,	Miner,	50	M.	Marvine,	Lackawanna,	Leg fractured by cars.
11	Dennis McGulre,	American,	Runner,	24	M.	Marvine,	Lackawanna,	Badly injured by cars.
15	John Schuster,	German,	Miner,	28	M.	Leggetts Creek,	Lackawanna,	Shoulder injured by fall of rock.
18	Peter Williams,	Welsh,	Miner,	35	M.	Leggetts Creek,	La kawanna,	Hip dislocated by fall of coal.
22	Isaac Williams,	Welsh,	Miner,	26	M.	Leggetts Creek,	Lackawanna,	Face and hands burned by explosion of gas.
23	Levi Emmanuel,	Welsh,	Asst. foreman,	45	M.	Leggetts Creek,	Lackawanna,	Face and hands burned by explosion of gas.
24	Jerry Arnold,	American,	Laborer,	31	M.	Leggetts Creek,	Lackawanna,	Face and hands burned by explosion of gas.

22	May	Henry Nelson,	Irish,	Miner,	42	S.	No. 1, D. & H.,	Lackawanna,	Badly injured by a fall of rock.
23		William Keller,	American,	Miner,	2	S.	Gail Brook,	Lackawanna,	Hand injured by a fall of rock.
24		Chas. Guernsey,	American,	Sawyer,	2	M.	Storrs No. 1,	Lackawanna,	Hand cut in saw mill.
1		Andrew Nichol,	English,	Fire boss,	40	M.	Pancoast,	Lackawanna,	Burned on hands and face by an explosion of gas.
1		Anth. Finnerty,	Irish,	Brattice man,	40	M.	Pancoast,	Lackawanna,	Burned on hands and face by an explosion of gas.
1		Henry Abbott,	English,	Brattice man,	26	M.	Pancoast,	Lackawanna,	Burned on hands and face by an explosion of gas.
1		Herman Griffith,	Welsh,	Doorboy,	15	S.	Leggetts Creek,	Lackawanna,	Leg fractured by cars.
2		Andrew Leishack,	Slavonic,	Laborer,	35	M.	Eddy Creek,	Lackawanna,	Injured by fall of rock.
7		Walter Ketski,	Polish,	Footman,	27	S.	Johnsons,	Lackawanna,	Injured by cars.
17		John Laermouth,	English,	Laborer,	34	M.	Richmond No. 3,	Lackawanna,	Leg fractured by fall of rock.
29		Thomas Llewellyn,	Welsh,	Rock man,	31	M.	Sterrick Creek,	Lackawanna,	Leg fractured by fall of rock.
29		Charles W. Cook,	English,	Rock man,	31	M.	Sterrick Creek,	Lackawanna,	Leg fractured by fall of rock.
1		John Stenski,	Polish,	Slate p. cer,	14	S.	Forest City,	Susquehanna,	Arm cut off by machinery of patent slate mill.
3		Joseph Cursick,	Slavonic,	Laborer,	20	S.	Sterrick Creek,	Lackawanna,	Injured by flying coal from a blast.
4		Joe St. Gheen,	American,	Laborer,	28	M.	Chess Creek,	Lackawanna,	Hips bruised by a fall of rock.
7		John McQuinn,	American,	Miner,	46	M.	Storrs No. 3,	Lackawanna,	Injured by blast.
7		John Schladu,	Slavonic,	Laborer,	23	S.	Mosic Mt.,	Lackawanna,	Crushed between cars.
10		Thomas Reese,	Welsh,	Timberman,	58	M.	Storrs No. 1,	Lackawanna,	Arm fractured by falling from platform.
15		John Neester,	Polish,	Miner,	39	M.	Glenwood,	Lackawanna,	bruised by fall of rock.
19		William Evans,	Welsh,	Driver,	42	M.	Leggetts Creek,	Lackawanna,	Injured by flying coal from blast.
21		Patrick McGerrity,	American,	Miner,	18	S.	Johnsons No. 1,	Lackawanna,	Fractured skull: kicked by a mule.
21		Andrew Gramshy,	Slavonic,	Laborer,	37	M.	Lackawanna,	Lackawanna,	Body bruised by fall of rock.
21		Jos. Marban,	Slavonic,	Laborer,	24	M.	Lackawanna,	Lackawanna,	Body bruised by fall of rock.
21		Charles Anderson,	Swedish,	Miner,	57	M.	Clinton,	Lackawanna,	Body bruised by fall of rock.
3		Jacob Patroski,	Polish,	Miner,	39	M.	Storrs No. 2,	Lackawanna,	Foot injured by a fall of coal.
8		Michael Russian,	Slavonic,	Laborer,	38	S.	Grassy Island,	Lackawanna,	Arm injured by a fall of coal.
19		William Wayman,	American,	Driver,	16	S.	Coal Brook,	Lackawanna,	Leg fractured by cars.
23		John Carden,	American,	Driver,	16	S.	Powderly,	Lackawanna,	Leg fractured by cars.
24		John Cavanaugh,	American,	Doorboy,	15	S.	Johnsons No. 1,	Lackawanna,	Arm fractured by cars.

Dec.



Second Anthracite District.

LACKAWANNA COUNTY.

Scranton, Pa., February 19, 1903.

Hon. James W. Latta, Secretary of Internal Affairs, Harrisburg,
Pa.

Dear Sir: I have the honor of presenting my report as Inspector of Mines for the Second Anthracite District for the year 1902, as required by section 9, article 2, Anthracite Mine Law, 1891, etc. It contains the usual statistics. The accidents which occurred during the year are in tabulated form.

Respectfully submitted,

H. O. PRYTHERCH,

Inspector.

SUMMARY OF STATISTICS FOR 1902.

Number of mine in district,	52
Number of mines in operation during 1902,	52
Number of tons of coal produced,	6,052,725
Number of tons shipped to market,	5,522,149
Number of tons sold at mines to local trade,	224,788
Number of tons consumed at mines in generating steam and heat,	305,788
Number of persons employed inside the mines,	13,288
Number of persons employed outside,	4,941
Number of fatal accidents inside the mines,	23
Number of tons produced for each fatal accident in- side,	263,162
Number of persons employed per fatal accident in- side,	577
Number of fatal accidents outside,	1
Number of persons employed per fatal accident out- side,	4,941
Number of wives made widows by fatal accidents, ..	12

Number of children orphaned by fatal accidents,	31
Number of non-fatal accidents inside of mines,	97
Number of persons employed per non-fatal accident inside,	137
Number of non-fatal accidents outside,	12
Number of persons employed per non-fatal accident outside,	412
Number of electric motors used inside,	13
Number of fans used for ventilation,	52
Number of furnaces used for ventilation,	2
Number of gaseous mines in operation during 1902, .	37
Number of non-gaseous mines in operation during 1902,	15

A. Production of Coal During the Year 1902.

Name of Companies.	Tons.
Delaware, Lackawanna and Western Railroad Com- pany,	3,368,152
Austin Coal Company,	23,614
Delaware and Hudson Company,	330,211
The Hudson Coal Company,	139,225
Scranton Coal Company,	803,006
Green Ridge Coal Company,	30,489
Pennsylvania Coal Company,	281,289
Wm. Connell & Co.,	65,608
Connell Coal Co.,	233,776
Jermyn & Co.,	286,614
Ellitt McClure & Co.,	88,381
A. D. & T. M. Spencer,	30,815
Nay Aug Coal Co.,	44,963
Gibbons Coal Co.,	11,096
North American Coal Company,	104,462
Bull's Head Coal Company,	23,182
People's Coal Company,	179,836
J. J. Gibbons,	5,468
Mountain Lake,	2,538
Total,	6,052,725

D. Classification of Non-fatal Accidents for the Year 1902.

	Indie of Mines.										Outside of Mines						Grand total.					
	By Falls of			By Falling Into							Total Inside.					Total outside.						
	Coal.	Slate.	Roof.	By mine cars.	By explosion of gas.	Smothered by gas.	Powder and dynamite.	By blasts, etc.	Shafts.	Slopes.	Manways, breasts, etc.	Crushed at batteries.	By mules.	Suffocated by coal, etc.	Miscellaneous causes.	Total inside.	By cars.	By machinery.	By suffocation.	By boiler explosions.	Miscellaneous causes.	Total outside.
January.			9	4	1	1		1	1						2	17						17
February.			3	4	1	1		1	1				1		1	10						10
March.			3	4	1	1		1	1				1		1	10					1	11
April.			3	5				1	1						1	10						10
May.			1					2								3						3
June.			1					1	1							1						1
July.			1					1	1							1						1
August.			2	1				4					2		1	9						9
September.			3	5			3	3					4		2	16						16
October.			4	3	2		2	3					4		7	22						22
November.			3	29	5		2	16					7		7	99	5	1				109
December.			33				2															
Totals.																						

F. Occupations of Employees Severely Injured Inside and Outside the Mines of the Second Anthracite District During 1902.

Months	Inside.										Outside.											
	Mine foremen.	Assistant mine foremen.	Fire bosses and assistants.	Miners.	Miners' laborers.	Drivers and runners.	Door-boys and helpers.	Pumpmen.	Company men.	All other employes.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers (boys).	State pickers (men).	Bookkeepers and clerks.	All other employes.	Total outside.	Grand total.	
January.				7	6	1	1			3	17											
February.				4	1	1	1		1		5									1	1	10
March.				3	4	2	1				10				1							11
April.				3	2	3					16											10
May.				3							9			1		4						10
June.				3							8											8
July.					1		1				1					1						2
August.					1						1					1						2
September.						1					4											5
October.				1	4	1			1		16											22
November.				7	4	4	4		1		22			1	1							26
December.											2											2
Totals.				34	23	22	6		3	19	98			2	2				7	11	109	

G. Nationality of Employees Killed or Fatally Injured Inside and Outside the Mines During 1902.

	American.	English.	Welsh.	Scotch.	Irish.	German.	Polish.	Lithuanian.	Total.
January,	2		1		2		1		
February,	1							1	
March,	1				1				
April,		1				1	1		
May,					1		2		
October,			1		1	2			
November,					1				
December,					1				
Total,	6	1	2		6	4	4	1	24

H. Nationality of Employees severely Injured Inside and Outside the Mines During 1902.

	American.	English.	Welsh.	Irish.	German.	Polish.	Italian.	Slavonic.	Lithuanian.	Russian.	Total.
January,	2		3	3		4				1	
February,	1		1	1	1	2		1			
March,	1	1	1	1	2			1	1		
April,	3	1									
May,	1		1	1		1					
August,						1		1			
September,							1				
October,	2		3	3	1						
November,	4		1	1	2	6		2			
December,	6	2	2	2		5	2	1			
Total,	19	3	21	21	7	22	4	5	3	1	119

I. Giving names of operators and mines, kind of openings, type and size of fans; size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each employee per minute in the mines of Second Anthracite District for the year 1902.

Names of Operators and Mines.	Kind of opening.	Gaseous or non-gaseous.	Method of ventilation.	Diameter and width of fan in feet.	Water gauge developed—in inches.	Name of fan.	Power used.	Number of air splits of air currents.	Number of cubic feet of air per minute entering the mine at inlet.	Total quantity of air per minute circulating in all the splits in cubic feet.	Number of cubic feet per minute passing out at out- let.	Number of persons employed inside.	Average number of cubic feet per minute provided for each person.
Delaware, Lack'a & Western R. Co.	Shaft.	Yes.	Fan.	16 x 3.5	.6	Open running...	Steam.	7	145,569	133,840	153,020	290	461
Archbald.	Shaft.	Yes.	Fan.	{ 14 x 4 16 x 4.5 }	1.3-1.2	Open running...	Steam.	12	265,880	140,865	129,584	495	320
Bellevue shaft.	Slope.	No.	Fan.	12 x 3.5	1.0	Open running...	Steam.	2	43,700	24,662	147,969	29	851
Brisbin.	Shaft.	Yes.	Fan.	14 x 4	1.0	Open running...	Steam.	10	115,504	126,000	114,820	363	289
Cayuga.	Shaft.	Yes.	Fan.	12 x 3.5	1.2	Open running...	Steam.	10	58,140	55,225	139,800	321	332
Sloan.	Shaft.	Yes.	Fan.	12 x 3.5	1.2	Open running...	Steam.	5	62,933	58,602	86,640	169	269
Central.	Shaft.	Yes.	Fan.	14 x 4	.75	Open running...	Steam.	5	107,735	84,743	125,332	167	350
Continental.	Shaft.	Yes.	Fan.	16 x 4.5	1.25	Open running...	Steam.	10	119,025	100,350	154,200	311	322
Dodge.	Shaft.	Yes.	Fan.	{ 14 x 4 16 x 4 }	.8	Open running...	Steam.	8	132,260	123,880	164,120	246	503
Diamond and Tripp shafts.	Shaft.	Yes.	Fan.	16 x 6	.8	Open running...	Steam.	6	96,100	80,050	100,100	255	314
Tripp drift.	Drift.	No.	Fan.	14 x 4	.8	Open running...	Steam.	6	114,024	92,515	102,608	286	323
Tripp slope.	Slope.	Yes.	Fan.	14 x 4	.9	Open running...	Steam.	10	172,355	138,165	200,510	225	618
Hyde Park.	Shaft.	Yes.	Fan.	{ 20 x 6 25 x 8 }	1.2	Open running...	Steam.	3	76,808	68,384	86,302	207	332
Manville.	Shaft.	Yes.	Fan.	25 x 8	.5	Open running...	Steam.	12	148,151	136,683	160,780	381	357
Hollen.	Shaft.	Yes.	Fan.	12 x 4	1.2	Open running...	Steam.	10	123,474	109,930	143,168	305	360
Hampton.	Shaft.	Yes.	Fan.	{ 14 x 4 12 x 3.5 }	1.5	Open running...	Steam.	10	123,474	109,930	143,168	305	360
Pyne.	Shaft.	No.	Fan.	12 x 3.5	.7	Open running...	Steam.	2	42,200	31,150	48,400	45	691
Taylor shaft.	Shaft.	No.	Fan.	12 x 3.5	.5	Open running...	Steam.	2	42,200	31,150	48,400	45	691
Taylor drift.	Drift.	No.	Fan.	12 x 3.5	.5	Open running...	Steam.	2	42,200	31,150	48,400	45	691
Austin Coal Co.	Drift.	No.	Fan.	12 x 3.5	.5	Open running...	Steam.	2	42,200	31,150	48,400	45	691
Austin tunnel.	Drift.	No.	Fan.	12 x 3.5	.5	Open running...	Steam.	2	42,200	31,150	48,400	45	691

TABLE I—Continued.

Names of Operators and Mines.	Kind of opening.	Gaseous or non-gaseous.	Method of ventilation.	Diameter and width of fan in feet.	Water gauge developed—in inches.	Name of fan.	Power used.	Number of air splits of air currents.	Number of cubic feet of air per minute entering the mine at inlet.	Total quantity of air per minute circulating in all the splits in cubic feet.	Number of cubic feet per minute passing out at out- let.	Number of persons employed inside.	Average number of cubic feet per minute provided for each person.
Delaware and Hudson Co.	Shaft,	Yes,	Fan,	{ 20 x 20 x 22 x 5 }	1.1 1.2 2.2	.....	Steam.	12	302,610	219,400	321,500	457	480
	Shaft & slope	Yes,	Fan,	{ 22 x 5 }	2.2	Guibal,	Steam.	9	171,410	170,910	187,920	328	531
Scranton Coal Co.	Shaft,	Yes,	Fan,	{ 17 x 4 17 x 6 }	1.2	Opening,	Steam.	9	144,180	124,050	157,050	369	336
	Shaft,	Yes,	Fan,	{ 20 x 5.5 20 x 5.5 }	1.0	Opening,	Steam.	8	115,000	102,600	127,000	270	377
Capouse,	Shaft,	Yes,	Fan,	{ 20 x 5 20 x 5 }	1.9	Opening,	Steam.	10	96,800	85,925	106,900	271	342
Mount Pleasant,	Shaft,	Yes,	Fan,	{ 20 x 5 20 x 5 }	1.5	Opening,	Steam.	5	47,950	42,550	54,839	93	455
West Ridge,	Slope,	Yes,	Fan,	{ 20 x 5 20 x 5 }	1.5	Opening,	Steam.	5	47,950	42,550	54,839	93	455
Pennsylvania Coal Co.	Shaft,	Yes,	Fan,	{ 20 x 5.5 20 x 5.5 }	1.2	Opening,	Steam.	7	166,028	100,233	248,018	290	501
	Shaft,	Yes,	Fan,	{ 20 x 5 20 x 5 }	.9	Opening,	Steam.	7	101,190	89,590	113,270	190	473
Old Forge No. 1,	Shaft,	Yes,	Fan,	{ 20 x 5 20 x 5 }	.6	Opening,	Steam.	8	81,308	76,271	123,362	290	513
Old Forge No. 2,	Shaft,	Yes,	Fan,	{ 20 x 5 20 x 5 }	.6	Opening,	Steam.	2	46,769	41,139	47,410	150	312
Old Forge slope,	Slope,	No,	Fan,	{ 17 x 4.5 17 x 4.5 }	.4	Opening,	Steam.	2	46,769	41,139	47,410	150	312
William Connell & Co.	Shaft,	Yes,	Fan,	{ 20 x 5.5 20 x 5.5 }	1.2	Opening,	Steam.	7	166,028	100,233	248,018	290	501
	Shaft,	Yes,	Fan,	{ 20 x 5 20 x 5 }	.9	Opening,	Steam.	7	101,190	89,590	113,270	190	473
Old Forge No. 1,	Shaft,	Yes,	Fan,	{ 20 x 5 20 x 5 }	.6	Opening,	Steam.	8	81,308	76,271	123,362	290	513
Old Forge slope,	Slope,	No,	Fan,	{ 20 x 5 20 x 5 }	.6	Opening,	Steam.	2	46,769	41,139	47,410	150	312
No. 4 or Meadow Brook,	Tunnel,	No,	Fan,	{ 16 x 4 16 x 4 }	1.5	Opening,	Steam.	4	51,100	50,174	53,118	143	350
	Shaft,	Yes,	Fan,	{ 16 x 4 16 x 4 }	1.5	Opening,	Steam.	3	56,100	54,180	62,880	142	588
William A.,	Shaft,	Yes,	Fan,	{ 16 x 5 16 x 5 }	.9	Opening,	Steam.	5	89,000	80,100	98,200	231	376
	Shaft,	Yes,	Fan,	{ 16 x 5 16 x 5 }	.4	Opening,	Steam.	4	45,800	40,040	49,500	87	450
Lawrence shafts and drifts,	Shaft,	Yes,	Fan,	{ 16 x 5 16 x 5 }	.4	Opening,	Steam.	5	89,000	80,100	98,200	231	376
	Shaft,	Yes,	Fan,	{ 16 x 5 16 x 5 }	.4	Opening,	Steam.	4	45,800	40,040	49,500	87	450
The Hudson Coal Co.	Shaft,	Yes,	Fan,	{ 17 x 5 17 x 5 }	.4	Opening,	Steam.	3	32,600	30,410	37,600	102	288
	Shaft,	No,	Natural,	{ 17 x 5 17 x 5 }	.4	Nat. ventilation,	Steam.	2	27,000	49,750	29,800	99	310
Greenwood, New No. 1,	Drift,	No,	Natural,	{ 17 x 5 17 x 5 }	.4	Nat. ventilation,	Steam.	2	27,000	49,750	29,800	99	310
Greenwood, Old No. 1,	Drift,	No,	Natural,	{ 17 x 5 17 x 5 }	.4	Nat. ventilation,	Steam.	2	27,000	49,750	29,800	99	310
Greenwood, New County Veln,	Drift,	No,	Natural,	{ 17 x 5 17 x 5 }	.4	Nat. ventilation,	Steam.	1	6,400	3,340	8,000	11	457

Greenwood No. 12,	Drift,	No...	Furnace,	No...	1	14,300	13,550	15,300	52
Greenwood No. 8,	Drift,	No...	Furnace,	No...	1	18,150	17,350	19,650	58
Greenwood No. 3,	Drift,	No...	Furnace,	No...	1	11,600	10,660	11,500	12
Greenwood No. 13,	Drift,	No...	Furnace,	No...	1	11,600	10,660	11,500	12
Greenwood No. 2,	Shaft,	Yes...	Furnace,	Yes...	2	28,210	26,590	30,400	88
Greenwood drift,	Drift,	No...	Natural,	No...	1	12,250	12,240	13,640	50
Green Ridge Coal Co.									
Green Ridge,	Slope,	Yes...	Fan,	Yes...	4	97,920	89,290	105,790	255
Jermyn & Co.									
Jermyn Nos. 1 and 3,	Shafts,	Yes...	Fans,	Yes...	9	131,310	120,215	133,775	361
Jermyn No. 2,	Shaft,	Yes...	Fan,	Yes...	8	98,651	88,164	99,458	347
Elliot, McTure & Co.									
Sibly,	Shaft,	Yes...	Fan,	Yes...	6	75,000	61,000	81,000	284
A. D. & F. M. Spence,	Shaft,	Yes...	Fan,	Yes...	6	71,200	70,110	84,410	153
Nay Aug Coal Co.									
Nay Aug,	Slope,	No...	Fan,	No...	1	20,300	10,300	24,000	50
Bulls Head Coal Co.									
Bull's Head,	Slope,	No...	Natural,	No...	2	36,200	17,000	36,300	29
People's Coal Co.									
Oxford,	haft,	Yes...	Fan,	Yes...	5	67,750	53,760	75,610	211
The Hudson Coal Co.									
Spring Brook,	Shaft,	Yes...	Fan,	Yes...	1	18,900	11,870	37,000	29
Spring Brook,	Slope,	No...	Fan,	No...	1	16,150	12,880	26,330	40
J. J. Gibbons,	Drift,	No...		No...					
Mountain Lake,	Drift,	No...		No...					

General Review.

The Second Anthracite District, which consisted of the collieries included between the lines of East and West Market streets, in the city of Scranton, and Slocum and Drinker streets, in the borough of Dunmore, on the north, the Lackawanna and Luzerne county line on the south, and the outcrops of the coal measures on the east and west, was created by the provisions of the Anthracite Mine Law of 1891, and as such ceased to exist December 31, 1902, when the Mine Inspectors who were elected to office under the provisions of an act amending article 2 of the Mine Law, and approved the 8th day of June, A. D. 1901, assumed their positions. These amendments required that the boundaries of the district should be changed December 31, 1901, but inasmuch as the eight additional Inspectors which the same amendments provided for, could not be elected until November, 1902, so as to enter on the duties of their respective offices January 1, 1903, the boundaries of the district were left undisturbed until December 31, 1902. The future Second Anthracite District has been constructed out of the original First District, and the original Second will be divided into two equal parts and be known as the Third and Fourth Inspection Districts.

The period of the existence of the Second Inspection District, as referred to in this report, and the tables which accompany it, is eleven years, 1892 to 1902, inclusive. At this time, therefore, it will be well to review the results as to the number of persons employed, total production of coal, number of fatal and non-fatal accidents, the number of tons of coal produced per life lost, and the number of tons of coal produced per non-fatal accident for each year in this period, and on these undeniable facts can be based an intelligent and sound judgment as to whether the conditions in the mines, as they affect the life and limb of those employed, are being improved or not. The following table has been compiled from the reports for each year named, which will present the results in concise form:

Table of Production and Accidents, 1892—1902.

Year.	Number employed.	Total production, tons.	Fatal accidents.	Non-fatal accidents.	Tons per life lost.	Tons per non-fatal accident.
1892,	14,111	6,013,537	33	181	182,228	33,224
1893,	14,491	5,956,475	35	173	169,613	34,315
1894,	15,473	5,674,579	41	141	138,404	40,245
1895,	16,269	6,189,095	34	192	182,044	32,237
1896,	16,347	5,895,669	39	161	151,171	36,619
1897,	16,578	5,985,630	58	149	103,200	40,172
1898,	15,851	5,496,150	31	154	177,295	35,689
1899,	15,419	6,774,458	49	159	138,254	42,607
1900,	16,787	6,429,112	55	152	116,893	42,297
1901,	18,024	8,674,060	63	186	137,683	46,634
1902,	18,229	6,052,725	24	139	252,197	55,529
Average,	16,144	6,283,808	44	159	148,968	39,340

1892—1902 Compared.

It will be noticed that the total number of persons employed has increased 4,118 in the course of eleven years; the production has increased from 6,013,537 tons in 1892, when there was no suspension of work, to 6,052,725 in 1902, when there was a strike during the year that lost over five months.

In the matter of accidents, those resulting in loss of life have decreased nine, and the non-fatal ones 72.

In 1902, 252,197 tons of coal were produced, as compared with 182,228 tons in 1892, per life lost, an increase in favor of 1902 of 69,969 tons per life lost.

Again, as to the production per non-fatal accident, in 1902, 55,529 tons of coal were produced per non-fatal accident, against 33,224 tons in 1892, an increase in favor of the former of 22,305 tons per accident.

Having compared the results attained in the last year of the period with those of the first, I will proceed to

Compare 1902 with the Average for Eleven Years.

Quoting again from the same table, an average of 16,144 persons per year were engaged in the work of mining coal and preparing it for the market. This number is 2,085 below the number employed in the same business in 1902.

Again, as to production, the average tonnage per year is 6,283,808, which is in excess of the production for 1902 by 231,083. In this connection, I would again note that the mines of the district were

idle for five months, and mining at a much reduced capacity for a considerable time thereafter in 1902.

The average number of fatal accidents per year for the period of eleven years is 44, while 24 deaths are reported as having occurred in and about the mines of the district in 1902, being 20 in favor of the latter year.

The average number of non-fatal accidents is 159, which is 50 in excess of the returns for 1902.

Finally, as to the average production in tons per life lost and per non-fatal accident, there are 148,968 and 39,340 to compare with 252,197 and 55,529 in 1902, being an increase of 103,329 tons per life lost, and an increase of 16,189 tons per non-fatal accident, all in favor of 1902.

Other favorable comparisons can readily be made from the same table.

Without indulging in any comments, the table made up of facts which have already appeared from year to year, will show the condition of the mines of the district as to safety. I am conscious of the fact that I am treating of accidents, and as such no mathematical formula can be applied with any degree of accuracy, nor deductions made on which predictions as to future results can be based.

Remarks on the Accidents of 1902.

In the report for 1901 it was found necessary to call attention to the increase in the number of fatalities occurring outside. The object in view at the time appears to have been reached, inasmuch as the number of lives lost from this cause have been reduced from 7, in 1901, to 1, in 1902, and while the total number of accidents, fatal and non-fatal, have been materially decreased in 1902, I feel it my duty to call attention at this time to the increase in the number of deaths from blasts inside. Five out of the 63 deaths reported in 1901 resulted from blasts, while 7 out of 24 fatalities reported in 1902 are attributed to blasts.

The care and use of powder, etc., is confined to the miner, and his knowledge and skill in this particular is a special qualification for the business of mining coal. Special attention is called to this important item, as it indicates less care on the part of the miner. My purpose is to stimulate the miners to a greater effort for self-preservation.

Mine officials' attention is invited to the same fact, and their co-operation with the Mine Inspector in demanding a strict enforcement of the provisions of the law as to the care and use of explo-

sives in mines and the precautions to be used and alarms to be given before blasts are to be exploded.

Mine Hospitals.

With one year's experience in the use of the mine hospitals required by law, I would say that this humane provision has resulted in much benefit to the unfortunate victims of mine accidents.

Mine Foreman's Examination.

The annual examination of candidates for certificates as mine foremen and assistant mine foremen was held in the city hall, August 19 and 20, 1901, and resulted in the following named persons being recommended to the Secretary of Internal Affairs to receive certificates as mine foremen:

William C. Jones, D. C. Young, Rudolph Lynn, Wm. Robertson, Benjamin Amos, Joseph H. Davies, P. J. Gaujhan, Anthony McHale, William Hopkins and William M. Howell.

Sixteen persons were recommended to receive certificates as assistant mine foremen.

Conclusion.

In conclusion, I would say that the work done by this office during the year has been reported in the monthly Narrative Reports to the Chief of the Bureau of Mines.

TABLE I—Showing names of operators, railroads, etc., and location of collieries in the Second Anthracite District for the year 1902.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Del., Lack. & W. R. R. Co.	Lackawanna	R. A. Phillips: C. E. Toby asst.	Scranton,	Thos. J. Williams,	Scranton,	D., L. & W. R. R.
Archbald,	Lackawanna	R. A. Phillips: C. E. Toby asst.	Scranton,	E. J. Evans,	Scranton,	D., L. & W. R. R.
Bellevue shaft,	Lackawanna	R. A. Phillips: C. E. Toby asst.	Scranton,	E. J. Evans,	Scranton,	D., L. & W. R. R.
Bellevue slope,	Lackawanna	R. A. Phillips: C. E. Toby asst.	Scranton,	H. G. Davis,	Scranton,	D., L. & W. R. R.
Brislin,	Lackawanna	R. A. Phillips: C. E. Toby asst.	Scranton,	H. G. Davis,	Scranton,	D., L. & W. R. R.
Cayuga,	Lackawanna	R. A. Phillips: C. E. Toby asst.	Scranton,	Thos. J. Williams,	Scranton,	D., L. & W. R. R.
Shan,	Lackawanna	R. A. Phillips: C. E. Toby asst.	Scranton,	Thos. J. Williams,	Scranton,	D., L. & W. R. R.
Central,	Lackawanna	R. A. Phillips: C. E. Toby asst.	Scranton,	Thos. J. Williams,	Scranton,	D., L. & W. R. R.
Continental,	Lackawanna	R. A. Phillips: C. E. Toby asst.	Scranton,	Thos. J. Williams,	Scranton,	D., L. & W. R. R.
Lodge,	Lackawanna	R. A. Phillips: C. E. Toby asst.	Scranton,	E. J. Evans,	Scranton,	D., L. & W. R. R.
Diamond,	Lackawanna	R. A. Phillips: C. E. Toby asst.	Scranton,	H. G. Davis,	Scranton,	D., L. & W. R. R.
Tripp shaft,	Lackawanna	R. A. Phillips: C. E. Toby asst.	Scranton,	H. G. Davis,	Scranton,	D., L. & W. R. R.
Tripp slope,	Lackawanna	R. A. Phillips: C. E. Toby asst.	Scranton,	H. G. Davis,	Scranton,	D., L. & W. R. R.
Tripp drift,	Lackawanna	R. A. Phillips: C. E. Toby asst.	Scranton,	H. G. Davis,	Scranton,	D., L. & W. R. R.
Hyde park,	Lackawanna	R. A. Phillips: C. E. Toby asst.	Scranton,	Thos. J. Williams,	Scranton,	D., L. & W. R. R.
Manville,	Lackawanna	R. A. Phillips: C. E. Toby asst.	Scranton,	H. G. Davis,	Scranton,	D., L. & W. R. R.
Holden,	Lackawanna	R. A. Phillips: C. E. Toby asst.	Scranton,	E. J. Evans,	Scranton,	D., L. & W. R. R.
Hampton,	Lackawanna	R. A. Phillips: C. E. Toby asst.	Scranton,	Thos. J. Williams,	Scranton,	D., L. & W. R. R.
Fyne,	Lackawanna	R. A. Phillips: C. E. Toby asst.	Scranton,	Thos. J. Williams,	Scranton,	D., L. & W. R. R.
Taylor,	Lackawanna	R. A. Phillips: C. E. Toby asst.	Scranton,	E. J. Evans,	Scranton,	D., L. & W. R. R.

TABLE I—Continued.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Wm. Connell & Co. National Meadow Brook tunnel.	Lackawanna.	Col. E. H. Ripple.	Scranton.	S. T. Jones.	Scranton.	D. L. & W. R. R.
Connell Coal Co. William A. shaft.	Lackawanna.	S. D. Warriner.	Wilkes-Barre.	Thomas Thomas.	West Pittston.	Lehigh Valley R. R.
Lawrence. Drifts 1 and 2.	Lackawanna.	S. D. Warriner.	Wilkes-Barre.	Thomas Thomas.	West Pittston.	Lehigh Valley R. R.
Jermyn & Co. Jermyn No. 1.	Lackawanna.	E. B. Jermyn.	Rendham.	E. B. Jermyn.	Rendham.	N. Y. O. & W. R. R.
Jermyn No. 2.	Lackawanna.	E. B. Jermyn.	Rendham.	E. B. Jermyn.	Rendham.	N. Y. O. & W. R. R.
Jermyn No. 3.	Lackawanna.	E. B. Jermyn.	Rendham.	E. B. Jermyn.	Rendham.	N. Y. O. & W. R. R.
Elliott, McClure & Co. Sibley.	Lackawanna.	James C. McClure.	Scranton.	James C. McClure.	Scranton.	Lehigh Valley R. R.
A. D. and F. M. Spencer. Spencer.	Lackawanna.	A. D. Spencer.	Scranton.	H. M. Spencer.	Dunmore.	E. & W. V. R. R.
Nay Aug Coal Co. Nay Aug slope.	Lackawanna.	.....	.....	J. D. Caryl.	Dunmore.	D. L. & W. R. R.
Nay Aug washery.	Lackawanna.	.....	.....	J. D. Caryl.	Dunmore.	D. L. & W. R. R.
Gibbons Coal Co. Gibbons mine.	Lackawanna.	Michael Gibbons.	Scranton.	Michael Gibbons.	Dunmore.	.....
North American Coal Co. Meadow Brook washery.	Lackawanna.	H. W. Sanna.	Wilkes-Barre.	Chas. B. Sharkey.	Dunmore.	Delaware & Hudson R. R.
National drift.	Lackawanna.	H. W. Sanna.	Wilkes-Barre.	Chas. B. Sharkey.	Dunmore.	Delaware & Hudson R. R.
Bulls Head Coal Co. Bulls Head slope.	Lackawanna.	Thos. Baggott.	Scranton.	Thos. Baggott.	Dunmore.	.....
People's Coal Co. Oxford.	Lackawanna.	Jas. H. Shephard.	Scranton.	Jno. G. Hayes.	Scranton.	D. L. & W. R. R.
J. J. Gibbons. Gibbons mine.	Lackawanna.	J. J. Gibbons.	Dunmore.	.....	.....	.....
Mountain Lake. Mountain Lake.	Lackawanna.	J. D. Caryl.	Scranton.	.....	.....	.....

TABLE II—Gives the total number of tons of coal mined in each colliery, number of days worked, number of employees, number of employees killed and injured, number of kegs of powder, etc., used in the Second Anthracite District for the year ending December 31, 1902.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Delaware, Lackawanna & West R. R.												
Archbald,	Lackawanna,	195,562	8,523	612	201,722	111	691	2	4	74.6	273	76
Bellevue,	Lackawanna,	177,666	5,662	12,057	181,045	122	717	1	5	5,975	500	96
Brishn,	Lackawanna,	141,771	20,932	2,078	165,338	130	863	1	1	5,975	1,131	71
Cayuga,	Lackawanna,	103,174	12,825	6,783	112,377	125	672	1	3	5,733	2,972	52
Shan and Central,	Lackawanna,	153,152	2,671	893	156,374	138	531	1	3	5,191	473	81
Cont nental,	Lackawanna,	188,232	3,100	718	192,155	181	654	1	9	7,516	245	68
Dodge,	Lackawanna,	205,892	21,803	4,637	232,332	112	674	1	6	6,467	1,718	61
Diamond,	Lackawanna,	145,181	2,751	11,376	157,331	137	429	1	3	5,377	150	84
Mayfield,	Lackawanna,	91,921	8,647	2,445	103,021	126	242	1	3	6,272	7,501	40
Helen,	Lackawanna,	17,405	1,800	12	19,217	43	242	1	5	7,099	50	26
Hampton,	Lackawanna,	105,392	.....	418	105,750	112	311	.....	1	3,564	.....	33
Pyne,	Lackawanna,	238,082	9,763	1,617	249,462	121	713	1	3	6,127	725	103
Taylor,	Lackawanna,	17,745	328	4,378	262,471	132	618	1	3	6,573	201	19
Totals,		2,172,791	98,817	49,105	2,320,623	129.3	7,918	9	58	77,314	16,233	975
Washeries—												
Bellevue,	Lackawanna,	228,583	.....	.....	228,583	215	54	.....	.....	.....	.....	4
Diamond,	Lackawanna,	221,347	12,775	.....	237,299	290	79	.....	.....	.....	.....	4
Hampton,	Lackawanna,	274,471	.....	.....	274,476	314	54	.....	.....	.....	.....	.....
Oxford,	Lackawanna,	131,792	3,830	.....	61,516	195	27	.....	.....	.....	.....	.....
Taylor,	Lackawanna, .....	.....	.....	.....	135,682	111	59	.....	1	.....	.....	.....
Totals,		1,070,681	16,605	.....	1,047,212	231	253	.....	1	.....	.....	8
Hampton Central Boiler Plant,	Lackawanna, .....	.....	.....	.....	.....	.....	19	.....	.....	.....	.....	.....

* Totals in this column are averages.

TABLE II.—Continued.

Names of Operators and Galleries.	County.	Shipments of coal in tons by									
		rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons	Total production of coal in tons.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.
Austin Coal Co. Austin tunnel, Delaware and Hudson Co. Dixson, Von Storch, Totals.	Lackawanna.	19,678	1,705	2,231	29,614	65	124	.....	1	716	1,396
	Lackawanna.	161,698	5,975	2,482	179,475	198	587	1	1	8,277	8,031
	Lackawanna.	117,385	28,699	2,751	158,735	123	679	.....	.....	6,251	5,351
	Lackawanna.	278,423	44,555	7,253	350,211	115	1,246	1	1	14,228	13,382
	Lackawanna.	66,479	5,805	1,270	73,695	74	493	.....	.....	5,675	6,131
The Hudson Coal Co. Greenwood No. 1, Greenwood No. 2, Spring Brook, Totals.	Lackawanna.	40,679	1,416	146	42,195	73	273	.....	.....	1,976	3,033
	Lackawanna.	16,424	3,216	829	20,459	86	167	1	2	1,414	.....
	Lackawanna.	123,573	13,407	2,245	139,225	77	923	1	5	9,015	9,344
	Lackawanna.	114,278	11,200	3,382	158,600	98	737	1	.....	7,794	4,123
	Lackawanna.	106,116	10,000	2,195	178,335	111	659	2	4	4,355	2,736
Stratton Coal Co. Pine Brook, Carouse, Mount Pleasant, West Ridge, Totals.	Lackawanna.	81,448	11,260	3,740	106,448	91	385	.....	.....	6,763	3,763
	Lackawanna.	42,119	4,300	2,661	49,140	91	238	.....	.....	2,712	1,352
	Lackawanna.	434,545	36,000	19,434	490,079	97	2,279	5	16	21,629	11,791
	Lackawanna.	139,726	2,000	808	142,024	127	61	.....	.....	.....	.....
	Lackawanna.	198,764	5,000	24,729	166,301	265	48	.....	.....	.....	.....
Washories Capouse, Mt Pleasant, Totals.	Lackawanna.	278,400	8,000	25,637	312,127	166	129	.....	.....	.....	.....
	Lackawanna.	15,544	1,103	13,842	20,489	41	457	.....	.....	.....	.....
	Lackawanna.	15,544	1,103	13,842	20,489	41	457	.....	.....	.....	.....
Green Ridge Coal Co. Green Ridge, Totals.	Lackawanna.	15,544	1,103	13,842	20,489	41	457	.....	.....	.....	.....
	Lackawanna.	15,544	1,103	13,842	20,489	41	457	.....	.....	.....	.....
Totals in this column are averages.											

Totals in this column are averages.

[illegible]

*Totals in this column are averages.

TABLE II—Continued.

[illegible]

TABLE III—Showing the number of each class of employees at each colliery in the Second Anthracite District, during the year 1902.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.								Grand total inside and outside.	
		Total Inside.										Total outside.									
		Mine foremen.	Assistant mine foremen.	Fire bosses and assistants.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	Pumpmen.	Company men.	All other employees.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers (boys).	State pickers (men).	Bookkeepers and clerks.	All other employees.		
Del., Lack'a & West, R. R. Co.		1	1	3	190	180	60	12	2	81	530	1	1	8	9	48	40	2	61	163	690
Archibald,	Lackawanna	3	5	183	187	87	27	16	6	48	19	565	1	1	7	10	77	2	46	152	717
Bellevue,	Lackawanna	1	1	4	150	150	75	17	5	30	13	445	2	2	8	10	34	2	52	108	553
Brisbin,	Lackawanna	1	1	1	154	151	60	14	2	5	60	4	2	5	7	13	13	2	73	152	603
Cayuga,	Lackawanna	1	1	3	76	80	30	13	2	38	11	274	2	2	5	7	13	2	73	172	638
Sloan,	Lackawanna	1	1	2	71	73	25	21	2	38	23	240	1	1	5	6	44	16	3	58	514
Central,	Lackawanna	1	1	2	124	124	54	14	2	18	41	352	1	1	2	6	44	16	3	132	514
Continental,	Lackawanna	1	1	1	155	155	58	17	2	21	48	479	1	1	5	7	35	2	68	118	577
Dodge,	Lackawanna	1	1	6	181	185	60	22	4	48	16	524	1	1	8	18	50	11	70	160	681
Diamond,	Lackawanna	1	1	3	131	134	53	17	1	24	37	464	1	1	4	4	50	20	48	130	451
Hyde Park,	Lackawanna	1	1	5	120	120	42	13	1	27	320	1	1	5	11	45	20	32	36	100	429
Manville,	Lackawanna	1	1	1	55	55	14	8	2	5	31	172	1	1	2	4	25	6	1	31	242
Holden,	Lackawanna	1	1	3	81	83	26	12	2	27	2	234	1	1	3	4	25	6	1	41	407
Hampton,	Lackawanna	1	1	3	173	173	66	12	2	53	26	510	3	3	8	11	53	35	91	273	713
Pyne,	Lackawanna	2	3	3	161	151	58	20	2	61	458	1	1	6	10	76	13	3	73	182	64
Taylor,	Lackawanna																				
Totals,		20	6	51	2,010	2,001	766	235	40	525	304	5,961	17	83	122	732	174	28	801	1,917	7,918
Washeries—																					
Bellevue,	Lackawanna	1	1	1	.....	.....	.....	.....	.....	7	.....	8	1	1	3	3	.....	1	37	46	54
Diamond,	Lackawanna	1	1	1	.....	.....	.....	.....	.....	12	.....	14	2	2	4	4	.....	2	32	45	59
Hampton,	Lackawanna	1	1	1	.....	.....	.....	.....	.....	6	.....	7	1	1	3	3	.....	1	42	47	54
Oxford,	Lackawanna	1	1	1	.....	.....	.....	.....	.....	10	.....	15	1	1	3	3	.....	1	15	20	27
Taylor,	Lackawanna	1	1	1	.....	.....	.....	.....	.....	29	.....	51	6	4	17	10	2	1	31	44	59
Totals,		4	1	2	5	.....	.....	.....	4	29	6	51	6	4	17	10	2	6	157	202	263

TABLE III—Continued.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.										Grand total inside and outside.
		Mine foremen.	Assistant mine foremen.	Five bosses and assistants.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	Pumpmen.	Company men.	All other employes.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers (boys).	State pickers (men).	Bookkeepers and clerks.	All other employes.	Total outside.	
Hampton Central Boiler Plant.	Lackawanna.	24	6	52	2,012	2,009	766	235	44	554	310	6,012	25	87	146	742	176	34	968	2,178	8,190	19
Totals.		1	1	1	28	26	13	1	1	6	9	84	1	1	4	3	8	7	1	15	40	124
Austin Coal Co.	Lackawanna.	1	1	1	157	157	72	18	2	59	4	47	1	1	14	14	13	23	2	56	124	587
Lackawanna.		1	1	4	177	177	80	18	2	.....	75	535	1	1	1	1	1	1	1	1	49	699
Totals.		2	3	9	334	334	152	36	4	59	79	1,412	1	2	17	25	49	32	3	106	234	1,246
The Hudson Coal Co.	Lackawanna.	1	1	2	131	99	53	16	3	20	11	337	1	1	11	10	59	5	1	69	156	493
Greenwood No. 1.	Lackawanna.	1	1	1	64	54	25	2	1	9	5	163	1	1	8	8	22	6	1	64	110	273
Greenwood No. 2.	Lackawanna.	1	1	1	43	28	24	4	1	12	1	114	1	1	2	4	25	.....	1	20	53	167
Spring Brook.	Lackawanna.	3	1	3	238	181	192	22	6	41	17	614	3	21	22	106	11	3	153	319	981	19
Totals.		1	1	4	156	166	58	64	5	.....	61	556	1	1	9	11	54	37	5	63	181	737
Seranton Coal Co.	Lackawanna.	1	1	3	151	161	90	19	6	.....	70	562	1	1	9	9	50	22	5	51	157	639
Pine Brook.	Lackawanna.	1	1	3	155	155	57	25	3	.....	67	449	1	1	6	11	50	12	2	33	196	586
Capouse.	Lackawanna.	2	2	3	70	69	25	5	1	.....	33	291	1	1	3	4	36	14	3	33	97	288
Mount Pleasant.	Lackawanna.	5	4	12	532	522	268	113	15	.....	237	1,708	4	4	27	35	202	85	14	200	571	2,279
Totals.																						

TABLE III—Continued.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.										Grand total inside and outside.
		Mine foremen.	Assistant mine foremen.	Fire bosses and assistants.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	Lumpmen.	Company men.	All other employes.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	Slate pickers (boys).	Slate pickers (men).	Bookkeepers and clerks.	All other employes.	Total outside.	
People's Coal Co.	Lackawanna,	1	1	2	81	92	42	15	.....	22	17	272	2	1	9	8	23	1	6	46	96	388
J. J. Gibbons.	.....	1	.....	.....	2	2	1	.....	1	.....	.....	7	1	.....	1	1	3	.....	1	2	9	16
Mountain Lake.	Lackawanna,	1	.....	.....	2	2	2	.....	.....	.....	.....	7	1	1	.....	1	3	.....	1	4	11	18
Grand totals.	.....	53	30	95	4,696	4,927	1,912	511	101	969	784	13,288	21	55	233	361	1,654	468	95	2,054	4,941	18,229

TABLE IV—List of fatal accidents that occurred in and about the mines of the Second Anthracite District for the year ending December 31, 1902.

Date of accident	Name of Person.	Nationality by birth	Occupation	Age.	Married or single.	Number of wid. ws.	Number of orphans.	Name of colliery.	County.	Nature and Cause of Accident in brief.
Jan. 9	Hopkin Pieknil,	Welsh,	Miner,	40	M.	1	....	Old Forge No. 2, ...	Lackawanna,	Killed by fall of roof at a point 20 feet from the face of chamber. He was securing the roof at the time of the accident.
13	James Woods,	American, ..	Driver,	17	S.	....	....	Wm. A.,	Lackawanna,	Was sitting at the corner of a pillar when a trip of loaded cars jumped the track, striking him with fatal results.
16	Chas. Kintoback,	Polish,	Miner,	38	M.	1	....	Mount Pleasant, ...	Lackawanna,	Died January 28, 1902, from injuries inflicted by flying coal from blast. The victim was returning to the face thinking the snub had missed.
20	John Alban,	American, ..	Driver,	15	S.	....	....	Nay Aug slope, ...	Lackawanna,	Died January 22d, 1902, from injuries resulting from being crushed between a mule and a car.
23	John Dougherty,	Irish,	Driver,	15	S.	....	....	Brishin,	Lackawanna,	Killed by being crushed between the top rail of a mine car and a pillar on the side of a chamber branch.
25	Julius Snyder,	American, ..	Driver,	21	S.	....	....	Nay Aug slope, ...	Lackawanna,	Killed by being crushed between a car and pillar on the narrow side of a gangway road.
22	John Dewry,	Irish,	Miner,	31	S.	....	....	Continental,	Lackawanna,	Died January 25th, 1902. He was preparing a charge of powder, when the contents of the keg exploded.
Feb. 4	Constantine Subersvitch, ...	Lithuanian, ..	Laborer,	35	M.	1	....	Manville,	Lackawanna,	Fall of roof. The victim disobeyed the orders of his miner by returning to the face before the roof had been examined after a blast. Died the same day.
12	Edward Fallon,	American, ..	Driver,	16	S.	....	....	Jermyn No. 3, ...	Lackawanna,	Crushed between a car and rib on the narrow side of a gangway road.
March 11	Wm. Ord,	American, ..	Co. man, ...	22	S.	....	....	Hyle Park,	Lackawanna,	Fell from Big Vein landing in main shaft to the Clark Vein below. An inquest was held. The coroner's jury failed to place the responsibility.

15	Thos. Mullany,	Irish,	Laborer,	30	S.	Archbald,	Lackawanna,	Instantly killed by fall of roof in a counter gangway. The miner had just made an examination of the roof and pronounced it safe.
27	John Keelin,	American,	Miner,	37	S.	Tripp slope, Diamond,	Lackawanna,	Killed by fall of roof in which he was drilling a hole.
26	John Golden,	Polish,	Miner,	34	M. 1 2	Capouse,	Lackawanna,	Died April 20th, from injuries inflicted by flying coal from blast. He supposed the squib had missed and was going back to it.
25	Henry Kuhn,	German,	Laborer,	58	M. 1 1	Bellevue shaft,	Lackawanna,	Killed by flying coal from blast. He had retreated to a point 150 feet from the chamber but had not taken shelter in a counter.
5	Otto Brath,	German,	Miner,	34	M. 1 5	Dickson,	Lackawanna,	Killed at face of chamber by a premature blast.
5	Paul Condeffer,	Polish,	Laborer,	23	S.	Archbald,	Lackawanna,	Killed by fall of roof at face of chamber in Rock Vein workings.
6	Richard Crocker,	English,	Doorboy,	16	S.	Taylor shaft,	Lackawanna,	He applied the flame of his lamp to dry some oil on his clothes. The flames spread, burning him severely. He died two days later.
7	Joseph Romanowskie,	Polish,	Laborer,	32	M. 1	Spring Brook slope	Lackawanna,	Killed by explosion of powder. The miner and laborer were changing a hose with explosives.
23	Thos. Doran,	Irish,	Miner,	35	M. 1 2	Wm. A.,	Lackawanna,	Instantly killed by fall of roof rock while operating an air drill.
11	James McGonegal,	Irish,	Miner,	52	M. 1 1	Mount Pleasant,	Lackawanna,	Fatally injured by fall of roof in a narrow vein in the Rock Vein. Died in the company's ambulance.
11	Geo. Huss,	German,	Miner,	40	M. 1 6	Jermyn No. 1,	Lackawanna,	Instantly killed by a fall of rock at the face of chamber in the Baltimore Vein.
25	Hopkin Hopkins,	Welsh,	Miner,	35	M. 1 4	Capouse,	Lackawanna,	Fatally injured by a fall of top coal. The victim was preparing a place to stand a prop when the accident occurred.
26	Chas. Biernlich,	German,	Shale picker,	14	S.	Mountain Lake,	Lackawanna,	While the victim was away from his post he fell headlong into the rolls and was instantly killed.
27	Jas. Scott,	Irish,	Miner,	45	M. 1 4	Pine Brook,	Lackawanna,	Instantly killed by a premature blast in the Junmore No. 3 Vein.

TABLE V—List of non-fatal accidents that occurred in and about the mines of the Second Anthracite District for the year ending December 31, 1902.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan.								
1	Anthony Manley,	Irish,	Miner,	48	M	Dia-Tripp shaft,	Lackawanna,	Slightly injured by blast.
2	Ed. Thomas,	Welsh,	Miner,	43	S	Tripp drift,	Lackawanna,	ribs fractured by falling roof.
4	Len Casey,	American,	Runner,	29	S	William A.,	Lackawanna,	Arm fractured and body bruised by mine cars.
7	Jos. Sitka,	Polish,	Laborer,	27	S	Pyne,	Lackawanna,	Foot injured by descending cage.
8	Nicholas Bennett,	Welsh,	Miner,	51	M	Dodge,	Lackawanna,	Shoulder and hip bruised by falling roof.
9	Emanuel James,	Welsh,	Carpenter,	42	M	Cayuga,	Lackawanna,	Scalp wound inflicted by cement falling in shaft.
19	Richard Dunnigan,	Irish,	Miner,	47	S	No. 5 shaft, Penna.,	Lackawanna,	Leg fractured by falling roof at face of chamber.
13	Joseph Dusky,	Polish,	Laborer,	51	M	Hampton,	Lackawanna,	Cut on head and body bruised by fall of rock in working face.
14	James McLoughney,	Irish,	Laborer,	20	S	Taylor shaft,	Lackawanna,	Slightly injured by a fall of roof in chamber.
18	Thomas Camr,	American,	Laborer,	18	S	Hyde Park,	Lackawanna,	Slightly injured by a fall of roof.
20	Edward Hogan,	Irish,	Footman,	16	S	Sloan,	Lackawanna,	Leg fractured by mine cars.
22	Anthony Busick,	Polish,	Laborer,	22	S	West Ridge,	Lackawanna,	Burned on hands and back by explosion of gas.
23	Wasko Solonsky,	Polish,	Miner,	34	M	Jermyn No. 2,	Lackawanna,	Slightly injured by a fall of soapstone.
25	Mike Nedzmirke,	Russian,	Miner,	40	M	Tripp slope, Dia.,	Lackawanna,	ribs fractured by a fall of roof.
27	Thos. V. Jones,	Welsh,	Miner,	43	M	Central,	Lackawanna,	Leg fractured by a fall of roof at face of chamber.
31	Ed. Z. Davies,	Welsh,	Footman,	29	S	Dodge,	Lackawanna,	Foot slightly injured by cars.
31	M. Lynch,	Irish,	Laborer,	23	S	M. Pleasant,	Lackawanna,	Slightly injured; cut his foot with an axe.
2	Thomas Pasco,	Polish,	Co. man,	32	M	Jermyn No. 2,	Lackawanna,	ribs fractured; pushed by a crowd into contact with the descending cage.
3	Andrew Teba,	Polish,	Miner,	46	M	Pyne,	Lackawanna,	Injured by a premature blast.
4	Ed. J. Davies,	Welsh,	Runner,	29	S	Pyne,	Lackawanna,	Leg fractured by cars.
5	Wm. Ludwig,	German,	Laborer,	39	M	Dodge,	Lackawanna,	Arm fractured by cars.
6	Mc. Kennedy,	Polish,	Miner,	35	M	Bellevue slope,	Lackawanna,	Slightly injured by a fall of roof.
6	Wm. Hughes,	Welsh,	Miner,	50	M	Bellevue shaft,	Lackawanna,	Severely injured by a fall of roof in mine vein.
10	Thos. Williams,	Welsh,	Miner,	28	S	Dodge,	Lackawanna,	Injured by fall of roof.
15	John Ruane,	Irish,	Door boy,	15	S	Manville,	Lackawanna,	Leg fractured by falling under cars.
Feb.								

March	12	Thos. Jenkins,	Welsh,	Runner,	19	S.	Sloan,	Lackawanna,	Leg fractured while he was coupling cars.
	11	Stacy Dunavish,	Polish,	Laborer,	40	M.	Taylor shaft,	Lackawanna,	Leg fractured by a fall of roof.
	11	Dom Dayute,	Italian,	Laborer,	40	M.	William A.,	Lackawanna,	Injured by fall of roof.
	13	John Uobosh,	German,	Miner,	38	M.	West Ridge,	Lackawanna,	Severely injured by a premature blast caused by ignited gas.
	17	Joe Buck,	Irish,	Door boy,	15	S.	Diamond,	Lackawanna,	Struck by a car while away from his post of duty.
	18	John Cusick,	Lithuanian,	Laborer,	30	M.	Manville,	Lackawanna,	Collar bone fractured by fall of roof.
	21	Ed. Evans,	Welsh,	Driver,	17	S.	Erishin,	Lackawanna,	Leg injured by falling under car.
	15	Thos. Hopkins,	American,	Driver,	21	S.	Oxford (People's),	Lackawanna,	Slightly injured; killed by mule.
	24	Martin Klink,	German,	Engineer, o. s.,	36	M.	William A., breaker,	Lackawanna,	Slightly injured; scalded by escaping steam.
	24	Steve Guskle,	Polish,	Miner,	27	M.	Mt. Pleasant,	Lackawanna,	Slightly injured by explosion of gas.
	27	Mike Coriel,	Slavonic,	Laborer,	33	M.	West Ridge,	Lackawanna,	Seriously injured by fall of roof.
	28	Andrew Halstone,	German,	Miner,	42	M.	Mt. Pleasant,	Lackawanna,	Rib fractured and shoulder dislocated by fall of roof.
	2	Edward Griffiths,	American,	Driver,	17	S.	Central,	Lackawanna,	Ankle severely injured by cars.
	3	Pat. Cashey,	American,	Laborer,	26	M.	Central (People's),	Lackawanna,	Ankle fractured by fall of roof in chamber.
April	3	Ralph Sauvage,	Lithuanian,	Driver,	16	S.	Cayuga,	Lackawanna,	Compound fracture of leg by electric motor.
	4	John R. Jones,	Welsh,	Laborer,	63	M.	Pyne,	Lackawanna,	Leg fractured by cars jumping the track and striking him.
	7	Wm. Thomas,	Welsh,	Miner,	24	S.	Sloan,	Lackawanna,	Leg fractured by fall of roof.
	9	John J. Davies,	Welsh,	Driver,	16	S.	Jernyn No. 2,	Lackawanna,	Leg fractured by fall of roof.
	10	Isaac Rossar,	English,	Miner,	48	M.	Archbald,	Lackawanna,	Leg fractured by fall of roof.
	15	Wm. Tragar,	American,	Driver,	26	S.	Hyd. tank,	Lackawanna,	Fell off bumper of car.
	25	Pete Gill,	Irish,	Tunnel,	22	S.	Central,	Lackawanna,	Finger cut-off by cars.
	28	Alex. Menicka,	Lithuanian,	Miner,	41	M.	Dickson,	Lackawanna,	Seriously injured by flying coal from a blast.
	5	H. S. Wilbur,	American,	Carpenter, o. s.,	20	M.	Holden breaker,	Lackawanna,	Foot cut by falling sheet iron.
	7	Hy. Davis,	Welsh,	Miner,	39	M.	Dodge,	Lackawanna,	Arm fractured by flying coal from blast.
	7	Anthony Kosack,	Polish,	Miner,	24	S.	Spring Brook slope,	Lackawanna,	Seriously injured by an explosion of powder. He was helping his miner to charge a hole.
	8	Edward Moran,	Irish,	Miner,	30	M.	Archbald,	Lackawanna,	Foot bruised by fall of roof.
Aug.	16	John Guyenskie,	Polish,	Laborer,	30	S.	Dodge,	Lackawanna,	Cut on head by fall of roof.
	29	Tony Kjespskie,	Slavonic,	Laborer, o. s.,	30	S.	Taylor washery,	Lackawanna,	Leg fractured by cars.
	29	John Toba,	Italian,	Laborer,	40	M.	Oxford (People's),	Lackawanna,	Cut on head and arm by flying coal from
Sept.	3	Waltr. Lancraut,	German,	Brakenhan, o. s.,	17	S.	Old Forge breaker,	Lackawanna,	Leg fractured; locomotive and cars jumped the track.
	8	Eugene Evans,	American,	Driver,	16	S.	Cayuga,	Lackawanna,	Leg fractured by cars.
	23	Henry Rapp,	American,	Miner,	28	S.	William A.,	Lackawanna,	Seriously injured by a fall of rock.
Oct.	25	Wm. R. Jones,	Welsh,	Co. man,	48	M.	Continental,	Lackawanna,	Head and eye injured by flying coal from blast.
	23	John Battle,	Irish,	Head man,	23	S.	Gibbons Coal Co.,	Lackawanna,	Leg fractured by cars jumping the track.
	25	Chas. Fallow,	Irish,	Driver,	18	S.	National,	Lackawanna,	Hip bone fractured by a kick from a mule.
	29	Wm. Reynon,	Welsh,	Contractor,	46	M.	Holden,	Lackawanna,	Injured by flying coal and rock from a
	29	Geo. Thomas,	Welsh,	Rockman,	34	M.	Holden,	Lackawanna,	Crushed between prop and mule; arm
	29	Taille Thomas,	Welsh,	Rockman,	28	S.	Meadow Brook,	Lackawanna,	fractured.
	31	Jos. Moore,	Irish,	Driver,	35	M.	Meadow Brook,	Lackawanna,	Seriously injured by falling roof rock.
	31	Jno. H. Williams,	Welsh,	Co. man,	30	M.	Mt. Pleasant,	Lackawanna,	

TABLE V—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Nov.								
1	Adam Warner.	German.	Miner.	47	M	Hyda Park.	Lackawanna.	Arm fractured by cars.
2	Benj. Mlarskie.	Polish.	Miner.	37	M	Jerry No. 1.	Lackawanna.	Hip bone fractured by fall of roof.
3	Michl. Lodruskie.	Slavonic.	Miner.	39	M	Green Ridge.	Lackawanna.	Seriously injured by flying coal from a blast.
6	Pat. Reap.	Irish.	Miner.	28	S	Old Forge No. 2.	Lackawanna.	Leg fractured by fall of roof.
6	Saml. Faby.	American.	Footman.	19	S	Green Ridge.	Lackawanna.	Injured by falling under cars.
10	Ray Smith.	American.	Driver.	17	S	National.	Lackawanna.	Three ribs fractured by descending cage at foot of shaft.
10	Andy Hoener.	German.	Driver.	41	S	Tripp drift.	Lackawanna.	Hip dislocated; struck by cars.
11	John Wismiegle.	Polish.	Miner.	46	M	William A.	Lackawanna.	Squeezed between car and rib.
11	Paul Galka.	Polish.	Laborer.	33	M	Mt. Pleasant.	Lackawanna.	Struck by flying coal from blast.
21	Michl. Shumsky.	Polish.	Laborer.	37	M	Dodge.	Lackawanna.	Leg fractured by falling roof.
22	Chas. Surlusky.	Polish.	Laborer.	25	S	Capouse.	Lackawanna.	Bruised on arm and back by falling roof.
27	Michl. Sullivan.	Irish.	Miner.	41	S	Capouse.	Lackawanna.	Injured by a fall of coal in a pillar, rolling place.
29	Joe Leland.	American.	Driver.	17	S	Wm. F. Ryan.	Lackawanna.	Leg and back bruised by falling rock.
29	Mike Seiden.	Slavonic.	Co. man.	41	S	Carriage Washery.	Lackawanna.	Slightly injured on thigh by cars.
29	John Wathers.	Welsh.	Runner.	37	S	Bellevue shaft.	Lackawanna.	Leg crushed between the bumpers of two cars.
Dec.								
10	Wm. McNicholas.	Irish.	Miner.	33	S	Slain.	Lackawanna.	Run over by an explosion of gas at face of chamber after a blast.
10	Thos. Ford.	Irish.	Miner.	44	M	Slain.	Lackawanna.	Burned by the explosion of a keg of powder.
17	Peter Carlsky.	Slavonic.	Laborer.	20	S	Spring Brook shaft.	Lackawanna.	Leg bruised by cars inside.
17	Mr. D. Williams.	Welsh.	Laborer.	16	S	Spring Brook shaft.	Lackawanna.	Struck by flying coal from a blast.
17	Norman Robinson.	English.	Miner.	33	M	Holden.	Lackawanna.	Killed by a mule; ribs fractured.
9	Thos. Hughes.	Irish.	Slape man.	30	S	Taylor shaft.	Lackawanna.	Killed by a mule; internal injuries.
9	Thos. Hughes.	Irish.	Holper.	19	S	Central.	Lackawanna.	Struck by timber.
9	Alex. McCrume.	American.	Porter, o. s.	17	S	William A.	Lackawanna.	Arm fractured by cars.
10	Anthony Landray.	Polish.	Laborer.	24	M	McLean shaft.	Lackawanna.	Simple fracture of arm.
10	Thos. Czerwinski.	Polish.	Laborer.	24	M	Central.	Lackawanna.	Skull fractured by a premature blast.
10	Alex. Sikite.	Polish.	Miner.	31	M	Bellevue shaft.	Lackawanna.	Head and face scalded by escaping steam.
12	J. M. Jones.	American.	Machinist.	39	M	Bellevue shaft.	Lackawanna.	

18	Gerald Roche	.....	American	.....	Doer boy	.....	14	S. M	Jermyn No. 1	.....	Lackawanna	Two fingers crushed by haulage rope.
20	Wm O. Russell	.....	Irish	.....	Engthor	.....	74	S. M	Doer boy	.....	Lackawanna	Injured on eye by a flying nut.
22	Donerick Gallagher	.....	Irish	.....	Co. man	.....	68	S. M	Doer boy	.....	Lackawanna	Kicked by a mule; rib fractured.
23	John Williams	.....	Welsh	.....	Miner	.....	76	S. M	Austlin	.....	Lackawanna	Leg fractured by flying coal from blast.
24	Martin Minook	.....	Polish	.....	Driver	.....	96	S. M	Austlin	.....	Lackawanna	Blindfolded by falling under mine cars.
25	Stanley Stumskie	.....	Polish	.....	Runner	.....	69	S. M	Lawrence shaft	.....	Lackawanna	Killed by mule; eye injured.
26	Paul G. Ryan	.....	Polish	.....	Driver	.....	77	S. M	Gr en Ridge slope	.....	Lackawanna	Slightly injured between a car and rib.
27	Jas. Green	.....	Polish	.....	Miner	.....	72	M	West Ridge slope	.....	Lackawanna	Foot injured by a fall of roof.
28	P. J. Mangin	.....	American	.....	Halter	.....	16	M	Diamond No. 2	.....	Lackawanna	Leg bruised by cars.
29	Joseph Biggo	.....	Irish	.....	Laborer	.....	75	M	Greenwood No. 2	.....	Lackawanna	Back injured; struck by culm car.
30	Jas. Lavo	.....	Italian	.....	Laborer	.....	25	S. M	Meade's Brook	.....	Lackawanna	Hip dislocated by falling rock.
		.....	Italian	.....	Co. man	.....	29	S. M	Greenwood No. 2	.....	Lackawanna	Squeezed under a rock car.



Third Anthracite District.

LUZERNE AND SULLIVAN COUNTIES.

Pittston, Pa., March 7, 1903.

Hon. James W. Latta, Secretary of Internal Affairs, Harrisburg,
Pa.

Sir: I have the honor of herewith submitting my annual report as Inspector of Coal Mines for the Third Anthracite District for the year 1902.

It contains the usual tabular statements of mine accidents, the number of each class of employes, quantity of coal produced and other useful information.

There were 5,077,167 tons of coal produced, being a decrease of 1,848,431 tons from that of 1901.

The number of fatal accidents for the year was 48; number of non-fatal ones, 115.

Twenty-four wives were made widows and 74 children under fourteen years of age left fatherless.

Respectfully,

H. McDONALD,
Inspector of Mines.

SUMMARY OF STATISTICS FOR 1902.

Number of mines in district,	78
Number of mines in operation during 1902,	73
Number of tons of coal produced,	5,077,167
Number of tons shipped to market,	4,515,848
Number of tons sold at mines to local trade,	97,876
Number of tons consumed at mines in generating steam and heat,	463,443
Number of persons employed inside the mines,	12,613
Number of persons employed outside,	5,584

Number of fatal accidents inside the mines,	40
Number of tons produced for each fatal accident inside,	126,824
Number of persons employed per fatal accident inside,	315
Number of fatal accidents outside,	8
Number of persons employed per fatal accident outside,	698
Number of wives made widows by fatal accidents, ..	24
Number of children orphaned by fatal accidents, ...	74
Number of non-fatal accidents inside of mines,	103
Number of persons employed per non-fatal accident inside,	122
Number of non-fatal accidents outside,	12
Number of persons employed per non-fatal accident outside,	398
Number of steam locomotives used inside,	3
Number of compressed air locomotives used inside, ..	3
Number of electric motors used inside,	5
Number of fans used for ventilation,	77
Number of furnaces used for ventilation,	5
Number of gaseous mines in operation during 1902, ..	48
Number of non-gaseous mines in operation during 1902,	25
Number of new mines opened during 1902,	1
Number of old mines abandoned during 1902,	5

A. Production of Coal During the Year 1902.

Names of Companies.	Tons.
Pennsylvania Coal Company,	1,335,801
Lehigh Valley Coal Company,	1,065,336
Hillside Coal and Iron Company,	539,735
Hudson Coal Company,	137,673
Delaware and Hudson Company,	74,678
Temple Iron Company,	384,626
Delaware, Lackawanna and Western Railroad Company,	141,101
Seneca Coal Company,	161,708
Raub Coal Co.,	69,168
John C. Haddock,	69,506
Clear Spring Coal Company,	143,545
W. G. Payne & Co.,	62,752
Traders' Coal Company,	53,136

Avoca Coal Company, Limited,	61,767
Robertson & Law,	52,111
Algonquin Coal Company,	76,282
Laurel Run Coal Company,	31,083
State Line and Sullivan Railroad Company,	192,999
W. B. Gunton,	126,540
Northern Anthracite Coal Company,	45,655
Stevens Coal Co.,	109,528
Wyoming Coal and Land Company,	53,439
Wm. Richmond,	24,385
Warnke Coal Company,	64,613
<hr/>	
Total,	5,077,167
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B. Showing the number of fatal and non-fatal accidents inside and outside the mines; number of tons of coal produced per fatal and non-fatal accident inside the mines; number of persons employed inside and outside; and the number employed inside and outside for every fatal and non-fatal accident for each company during 1902.

Names of Companies	Number of lives lost inside.		Number of lives lost outside.		Total number of lives lost.		Number severely injured inside.		Number severely injured outside.		Total number severely injured.		Tons of coal produced per each life lost inside.		Tons of coal produced per serious injury inside.		Number employees inside of mines.		Number employees outside of mines.		Total number employed.		Number of employees inside for each severe injury.		Number of employees outside for each life lost.		Number of employees outside for each severe injury.	
	4	8	2	1	4	10	12	3	3	15	23	323,950	89,053	3,452	1,147	4,599	287	739	497	739	497	739	497	739	497	739	497	
Pennsylvania Coal Co.,	1	1	1	1	4	3	4	3	3	15	23	133,167	59,770	2,385	1,479	3,874	299	749	497	749	497	749	497	749	497	749	497	
Lehigh Valley Coal Co.,	1	1	1	1	4	3	4	3	3	15	23	133,167	59,770	2,385	1,479	3,874	299	749	497	749	497	749	497	749	497	749	497	
Hillsdale Coal and Iron Co.,	1	1	1	1	4	3	4	3	3	15	23	133,167	59,770	2,385	1,479	3,874	299	749	497	749	497	749	497	749	497	749	497	
Hudson Coal Company,	1	1	1	1	4	3	4	3	3	15	23	133,167	59,770	2,385	1,479	3,874	299	749	497	749	497	749	497	749	497	749	497	
Delaware and Hudson Co.,	1	1	1	1	4	3	4	3	3	15	23	133,167	59,770	2,385	1,479	3,874	299	749	497	749	497	749	497	749	497	749	497	
Temple Iron Company,	1	1	1	1	4	3	4	3	3	15	23	133,167	59,770	2,385	1,479	3,874	299	749	497	749	497	749	497	749	497	749	497	
Delaware, Lackawanna and Western R. R. Co.,	1	1	1	1	4	3	4	3	3	15	23	133,167	59,770	2,385	1,479	3,874	299	749	497	749	497	749	497	749	497	749	497	
Seneca Coal Co.,	1	1	1	1	4	3	4	3	3	15	23	133,167	59,770	2,385	1,479	3,874	299	749	497	749	497	749	497	749	497	749	497	
Raub Coal Co.,	1	1	1	1	4	3	4	3	3	15	23	133,167	59,770	2,385	1,479	3,874	299	749	497	749	497	749	497	749	497	749	497	
John C. Haddock,	1	1	1	1	4	3	4	3	3	15	23	133,167	59,770	2,385	1,479	3,874	299	749	497	749	497	749	497	749	497	749	497	
West Spring Coal Co.,	1	1	1	1	4	3	4	3	3	15	23	133,167	59,770	2,385	1,479	3,874	299	749	497	749	497	749	497	749	497	749	497	
Wheat Creek Coal Co.,	1	1	1	1	4	3	4	3	3	15	23	133,167	59,770	2,385	1,479	3,874	299	749	497	749	497	749	497	749	497	749	497	
Trumbull Coal Co.,	1	1	1	1	4	3	4	3	3	15	23	133,167	59,770	2,385	1,479	3,874	299	749	497	749	497	749	497	749	497	749	497	
Ayres Coal Co. Limited,	1	1	1	1	4	3	4	3	3	15	23	133,167	59,770	2,385	1,479	3,874	299	749	497	749	497	749	497	749	497	749	497	
Robertson & Low,	1	1	1	1	4	3	4	3	3	15	23	133,167	59,770	2,385	1,479	3,874	299	749	497	749	497	749	497	749	497	749	497	
Alexander Coal Co.,	1	1	1	1	4	3	4	3	3	15	23	133,167	59,770	2,385	1,479	3,874	299	749	497	749	497	749	497	749	497	749	497	
Laurel Run Coal Co.,	1	1	1	1	4	3	4	3	3	15	23	133,167	59,770	2,385	1,479	3,874	299	749	497	749	497	749	497	749	497	749	497	
State Line and Sullivan R. R. Co.,	1	1	1	1	4	3	4	3	3	15	23	133,167	59,770	2,385	1,479	3,874	299	749	497	749	497	749	497	749	497	749	497	
W. B. Guntion,	1	1	1	1	4	3	4	3	3	15	23	133,167	59,770	2,385	1,479	3,874	299	749	497	749	497	749	497	749	497	749	497	
Northern Anthracite Coal Co.,	1	1	1	1	4	3	4	3	3	15	23	133,167	59,770	2,385	1,479	3,874	299	749	497	749	497	749	497	749	497	749	497	
Stevens Coal Co.,	1	1	1	1	4	3	4	3	3	15	23	133,167	59,770	2,385	1,479	3,874	299	749	497	749	497	749	497	749	497	749	497	
Wyoming Coal and Land Co.,	1	1	1	1	4	3	4	3	3	15	23	133,167	59,770	2,385	1,479	3,874	299	749	497	749	497	749	497	749	497	749	497	
Wm. Richmond,	1	1	1	1	4	3	4	3	3	15	23	133,167	59,770	2,385	1,479	3,874	299	749	497	749	497	749	497	749	497	749	497	
Clarence Coal Co.,	1	1	1	1	4	3	4	3	3	15	23	133,167	59,770	2,385	1,479	3,874	299	749	497	749	497	749	497	749	497	749	497	
Warne Coal Co.,	1	1	1	1	4	3	4	3	3	15	23	133,167	59,770	2,385	1,479	3,874	299	749	497	749	497	749	497	749	497	749	497	
Totals and averages,	40	8	48	101	115	126,924	50,269	12,613	5,584	18,197	315	696	398	739	497	739	497	739	497	739	497	739	497	739	497	739	497	

*Sold to Hudson Coal Co. May 1, 1902. †Mine caved in time of strike. Idle yet. ‡This colliery produced no coal this year; erecting a breaker.

C. Classification of Fatal Accidents for the Year 1902.

	Inside of Mines.										Outside of Mines.						Grand total.
	By Falls of			By Falling Into							Total inside.						
	Coal.	State.	Roof.	By mine cars.	By explosion of gas.	Smothered by gas.	Powder and dynamite.	By blasts, etc.	By Falling Into			Crushed at batteries.	By mules.	Suffocated by coal, etc.	Miscellaneous causes.	Total inside.	
									Shafts.	Slopes,	Manways, breasts, etc.						
January,	1		1	1	4			1	2							1	8
February,				1					1								4
March,	2		1	1	1			1								1	11
April,					1											1	4
May,				1												1	1
June,				1												1	1
July,																1	1
August,		1			1												1
September,			1														1
October,	1		1	1										1			3
November,					6			2	2								10
December,																	0
Totals,	4	1	17	5	6			2	2						2		40

D. Classification of Non-fatal Accidents for the Year 1902.

	Inside of Mines.												Outside of Mines.						Grand total.								
	By Falls of			By mine cars.			By explosion of gas.	Smoothered by gas.	Powder and dynamite.	By blasts, etc.	By Falling Into			Crushed at batteries.	By mules.	Suffocated by coal, etc.	Miscellaneous causes.	Total inside.		By cars.	By machinery.	By suffocation.	By boiler explosions.	Miscellaneous causes.	Total outside.		
	Coal.	State.	Hoof.	Shafts.	Stairs.	Manways, breaks, etc.																					
January,	1		1	4	3				1	1	1						1		1	16	1				1	17	
February,			1	2	1												1		1	13						2	21
March,	1		1	4	1				1	1	1						1		1	13	1					3	21
April,	1		1		2												1		1	11	1					3	21
May,																	1			1	1					1	3
June,																				1	1					1	2
July,			1																	1	1					1	3
August,																				1	1					1	3
September,	1			1															1	1						1	3
October,			1	4	1														1	13						1	17
November,	1		1		1														3	25						1	26
December,	2		1		4														1	23						1	26
Totals,	7		20	18	16				7	17							7		9	101	7	2		5	14	115	

E. Occupations of Employees Killed or Fatally Injured Inside and Outside the Mines of the Third Anthracite District During 1902.

Months.	Inside.										Outside.										
	Mine foremen.	Assistant mine foremen.	Pit bosses and assistants.	Miners.	Miners' laborers.	Drivers and runners.	Boorboys and helpers.	Pumpmen.	Company men.	All other employees.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers (boys).	State pickers (men).	Bookkeepers and clerks.	All other employees.	Total outside.	Grand total.
January.	1			12	16	4			1	3	8						1			1	3
February.					6	1			1	1	1						1			1	4
March.					4				1	1	1						1			1	4
April.	1					1											1			1	2
May.										1	1				1					1	2
June.				1		1															1
July.				1	1	1															3
August.				1		1															2
September.				1		1															2
October.				1		1															2
November.				1		1															2
December.				1		1															2
Totals.	1			12	16	4			2	5	40				1	3			4	3	47

F. Occupations of employes severely injured inside and outside the Mines of the Third Anthracite District during 1902.

Months.	Inside.										Outside.										
	Mine foremen.	Assistant mine foremen.	Fire bosses and assistants.	Miners.	Miners' laborers.	Drivers and runners.	Doorboys and helpers.	Pumpmen.	Company men.	All other employes.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers (boys).	State pickers (men).	Bookkeepers and clerks.	All other employes.	Total outside.	Grand total.
January.	1	1	1	4	21	13	7	1	9	7	101	1	1	1	2	1	1	1	11	14	115
February.	1	1	1	4	21	13	7	1	9	7	101	1	1	1	2	1	1	1	11	14	115
March.	1	1	1	4	21	13	7	1	9	7	101	1	1	1	2	1	1	1	11	14	115
April.	1	1	1	4	21	13	7	1	9	7	101	1	1	1	2	1	1	1	11	14	115
May.	1	1	1	4	21	13	7	1	9	7	101	1	1	1	2	1	1	1	11	14	115
June.	1	1	1	4	21	13	7	1	9	7	101	1	1	1	2	1	1	1	11	14	115
July.	1	1	1	4	21	13	7	1	9	7	101	1	1	1	2	1	1	1	11	14	115
August.	1	1	1	4	21	13	7	1	9	7	101	1	1	1	2	1	1	1	11	14	115
September.	1	1	1	4	21	13	7	1	9	7	101	1	1	1	2	1	1	1	11	14	115
October.	1	1	1	4	21	13	7	1	9	7	101	1	1	1	2	1	1	1	11	14	115
November.	1	1	1	4	21	13	7	1	9	7	101	1	1	1	2	1	1	1	11	14	115
December.	1	1	1	4	21	13	7	1	9	7	101	1	1	1	2	1	1	1	11	14	115
Totals.	1	1	1	41	21	13	7	1	9	7	101	1	1	1	2	1	1	1	11	14	115

G. Nationality of Employes Killed or Fatally Injured Inside and Outside the Mines During 1902.

	Americans.	English.	Welsh.	Irish.	Germans.	Poles.	Hungarians.	Italians.	Slavs.	Austrians.	Russians.
January,	3	.....	.....	1	1	1	1	.....	.....	2	.....
February,	1	.....	.....	1	1	1	1	.....	.....	.....	1
March, .....	.....	.....	.....	2	2	4	2	1	.....	.....	.....
April,	1	1	.....	1	.....	1	.....	2	.....	.....	1
May,	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
June,	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
July, .....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....
September, .....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
November,	1	1	.....	.....	.....	1	.....	.....	.....	.....	.....
December,	2	.....	.....	1	.....	2	.....	1	1	.....	.....
Totals,	10	1	2	3	4	10	4	4	1	2	2

H. Nationality of Employes Severely Injured Inside and Outside the Mines During 1902.

	Americans.	English.	Welsh.	Scotch.	Irish.	Germans.	Poles.	Hungarians.	Italians.	Slavs.	Lithuanians.	Austrians.	Russians.
January,	6	1	1	1	1	.....	2	.....	.....	4	1	.....	.....
February,	6	2	1	.....	6	1	4	1	.....	.....	.....	.....	.....
March,	2	.....	3	.....	2	.....	1	1	.....	.....	.....	.....	.....
April,	4	.....	1	.....	3	.....	3	.....	.....	2	.....	1	.....
May,	2	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....
June,	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
July, .....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....
September,	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
October, .....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....
November, .....	.....	1	.....	.....	.....	.....	5	1	.....	.....	1	.....	.....
December,	3	.....	.....	.....	2	.....	11	1	3	4	.....	.....	1
Totals,	34	4	6	1	14	2	28	4	6	11	3	1	1

I. Giving names of operators and mines, kind of openings, type and size of fans; size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number employed inside, and quantity of air produced for each employee per minute in the mines of Third Anthracite District for the year 1902.

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous.	Method of ventilation.	Diameter and width of fan in feet	Water gauge developed—in inches	Name of fan.	Power used.	Area of furnace bars in square feet.	Number of air splits of air currents.	Number of cubic feet of air per minute entering the mine at inlet.	Total quantity of air per minute circulating in all the splits in cubic feet.	Number of cubic feet per lot.	Number of persons employed inside.	Average number of cubic feet per minute provided for each person.
Pennsylvania Coal Co.														
Barnum No. 1.	Shaft.	Gaseous.	Fan.	17 x 5.	8.	Gubal.	Steam.	.....	3	78,210	72,600	85,000	89	961
Barnum No. 2.	Shaft.	Gaseous.	Fan.	20 x 6½.	1.1	Gubal.	Steam.	.....	3	59,100	63,350	63,200	123	480
Barnum No. 3.	Shaft.	Gaseous.	Fan.	17 x 5.	1.1	Gubal.	Steam.	.....	4	75,710	65,260	70,250	198	352
No. 13.	Shaft.	Gaseous.	Fan.	20 x 6.	1.6	Gubal.	Steam.	.....	3	77,000	66,500	88,310	179	431
Laws.	Shaft.	Gaseous.	Fan.	20 x 6.	1.1	Gubal.	Steam.	.....	5	95,210	77,900	110,200	169	563
No. 1.	Shaft.	Gaseous.	Fan.	20 x 6½.	1.1	Gubal.	Steam.	.....	4	74,320	61,680	82,000	149	498
No. 8.	Shaft.	Gaseous.	Fan.	20 x 6.	1.1	Gubal.	Steam.	.....	3	81,860	70,490	85,000	135	666
No. 4.	Shaft.	Gaseous.	Fan.	20 x 6.	1.1	Gubal.	Steam.	.....	5	74,340	59,320	70,780	179	415
No. 5.	Shaft.	Gaseous.	Fan.	20 x 6.	1.1	Gubal.	Steam.	.....	6	83,400	78,260	87,300	164	543
No. 6.	Shaft.	Gaseous.	Fan.	20 x 6.	1.1	Gubal.	Steam.	.....	5	68,700	55,400	78,500	153	473
No. 11.	Shaft.	Gaseous.	Fan.	20 x 6.	1.1	Gubal.	Steam.	.....	5	88,000	75,000	106,840	173	515
No. 9.	Shaft.	Gaseous.	Fan.	20 x 6.	1.1	Gubal.	Steam.	.....	5	85,000	75,000	106,840	205	472
No. 10.	Shaft.	Gaseous.	Fan.	20 x 6.	1.1	Gubal.	Steam.	.....	4	66,700	53,560	71,500	170	392
No. 10, Jr.	Shaft.	Gaseous.	Fan.	20 x 6.	1.1	Gubal.	Steam.	.....	4	76,770	63,590	81,770	142	510
No. 7.	Shaft.	Gaseous.	Fan.	20 x 6.	1.1	Gubal.	Steam.	.....	8	150,250	131,850	157,490	233	674
Hoyt.	Shaft.	Gaseous.	Fan.	20 x 6.	1.6	Gubal.	Steam.	.....	6	101,300	63,600	112,900	131	733
No. 14.	Tunnel.	Gaseous.	Fan.	17 x 5.	1.8	Gubal.	Steam.	.....	7	93,300	83,600	109,700	172	519
Lehigh Valley Coal Co.														
Prospect shaft.	Shaft.	Gaseous.	2 fans.	30 x 9.	1.8	Gubal.	Steam.	.....	5	120,600	88,400	137,600	293	411
Oakwood.	Shaft.	Gaseous.	Fan.	20 x 9.	1.2	Gubal.	Steam.	.....	4	90,210	60,580	98,360	152	751
Milvale.	Slope.	Gaseous.	Fan.	30 x 6½.	1.1	Gubal.	Steam.	.....	3	79,870	59,910	91,960	136	614
Hillman.	Slope.	Gaseous.	Fan.	15 x 4½.	1.1	Gubal.	Steam.	.....	6	77,894	47,623	91,508	117	605
Wyoming.	Shaft.	Gaseous.	Fan.	25 x 7½.	1.8	Gubal.	Steam.	.....	6	105,489	102,400	106,600	106	995
Henry.	Shaft.	Gaseous.	Fan.	30 x 9.	1.2	Gubal.	Steam.	.....	9	126,604	76,710	135,580	219	605
Matthy.	Shaft.	Gaseous.	2 fans.	(20 x 6½)	2.	Gubal.	Steam.	.....	8	150,000	136,210	161,500	328	487

*Idle all year.

Matty	Tunnel	Non-gas.	Fan.	6 x 2	1/2	Guibal.	Steam.	2	32,169	29,540	34,000	47	883
Exeter No. 1	Shaft	Gaseous.	2 fans.	20 x 6 1/2	.8	Guibal.	Steam.	4	121,460	84,450	146,310	156	783
Exeter No. 2	Shaft	Gaseous.	Fan.	20 x 6 1/2	1.3	Guibal.	Steam.	3	33,200	48,560	56,350	157	463
Heidelberg No. 1	Slope	Gaseous.	Fan.	16 x 4 1/2	.7	Guibal.	Steam.	2	45,506	28,477	56,590	108	421
Heidelberg No. 2	Shaft	Gaseous.	Fan.	20 x 6 5	.7	Guibal.	Steam.	3	72,490	60,290	79,990	102	709
Heidelberg No. 3	Slope	Gaseous.	Fan.	12 x 4									
Mineral Spring	Slope	Non-gas.	Fan.	20 x 6		Guibal.							
Coal Brook	Slope	Non-gas.	Fan.	20 x 6									
Seneca Coal Co.													
Twin No. 1	Shaft	Gaseous.	2 fans.	20 x 6 1/2	.7	Guibal.	Steam.	6	95,875	85,400	102,735	181	630
Twin No. 2	Shaft	Gaseous.	Fan.	20 x 6 1/2	.8	Guibal.	Steam.	6	125,750	103,350	126,950	282	415
Columbia	Shaft	Gaseous.	Fan.	20 x 6 1/2	.5	Guibal.	Steam.	4	66,292	58,822	76,579	104	647
Hillside Coal and Iron Co.													
Chapman	Shaft	Non-gas.	Fan.	17 x 5 1/2	.8	Guibal.	Steam.	3	59,885	47,260	73,210	145	412
Butler	Tunnel	Non-gas.	Furnace.				5x8	1	14,062	10,270	15,374	19	740
Fernwood	Shaft	Non-gas.	Fan.	16 x 5	.7	Guibal.	Steam.	2	63,319	60,430	78,000	201	348
Fernwood	Tunnel	Non-gas.	Furnace.				4x6	2	7,500	28,500	38,500	18	593
Consolidated	Slope	Non-gas.	Fan.	12 x 4	1 1/2	Guibal.	Steam.	2	7,500	52,300	74,000	122	579
Consolidated	Shaft	Non-gas.	Fan.	12 x 4	.9	Guibal.	Steam.	3	68,506	58,645	71,421	167	410
Edmwood	Shaft	Non-gas.	Fan.										
Edmwood	Shaft	Non-gas.	Fan.										
Wyoming Coal and Land Co.													
Griffith	Tunnel	Non-gas.	Fan.	12 x 4	1 1/2	Guibal.	Steam.	4	87,940	35,930	88,210	105	837
John C. Hudblock.													
Black Diamond	Shaft	Gaseous.	Fan.	20 x 6 1/2	2	Guibal.	Steam.	5	103,640	40,580	120,600	175	582
Clarence Coal Co.													
Gardner Creek	Tunnel	Non-gas.	Fan.	15 x 4 1/2	.6	Guibal.	Steam.	4	50,315	38,210	54,200		
Raub Coal Co.													
Louise	Slope	Gaseous.	Fan.	20 x 6 1/2	.7	Guibal.	Steam.	4	69,210	48,700	72,690	177	391
Louise	Tunnel	Non-gas.	Fan.	10 x 2 1/2	.5	Guibal.	Steam.	3	29,100	18,500	21,200	50	402
Crescent Coal Co.													
Crescent	Tunnel												
Delaware and Hudson Co.													
Delaware shaft	Shaft	Gaseous.	2 fans.	22 x 6 S	.9	Guibal.	Steam.	7	60,400	68,510	98,200	182	476
Hudson Coal Co.													
Pine Ridge	Shaft	Gaseous.	2 fans.	17 x 4 1/2	1.9	Guibal.	Steam.	9	142,200	120,410	151,880	379	459
Lanell Run	Slope	Gaseous.	2 fans.	(17 x 4 1/2)	1.5	Guibal.	Steam.	5	120,600	78,000	143,635	103	709
Ladlin	Shaft	Non-gas.	Fan.	120 x 5				3	11,457	23,655	36,555	16	774
Ladlin	Tunnel	Non-gas.	Furnace.	17 x 4 1/2	.3	Guibal.	Steam.	4x8	11,457	32,995	42,920	24	478
Lane life	Shaft	Non-gas.	Fan.	14 x 4 1/2	.7	Guibal.	Steam.	1	19,205	63,840	92,570	128	488
Laugheffe	Tunnel	Non-gas.	Natural.					1	27,000	3,840	29,240	54	566

*Idle.

TABLE I—Continued.

Names of Operators and Mines.	Kind of opening.	Gaseous or non-gaseous.	Method of ventilation.	Diameter and width of fan in feet.	Water gauge developed—in inches.	Name of fan.	Power used.	Area of furnace bars in square feet.	Number of air splits of air currents.	Number of cubic feet of air per minute entering the mine at inlet.	Total quantity of air per minute circulating in all the splits in cubic feet.	Number of cubic feet per minute passing out at out- let.	Number of persons employed inside.	Average number of cubic feet per minute provided for each person.
Temple Iron Co.														
Harry E.	Shaft, ...	Gaseous.	2 fans, ...	{ 20 x 6½ 12 x 4½ }	1.8	Gubal, ...	Steam, ...	.....	5	158,800	148,760	161,655	309	513
Ferry Port, ...	Shaft, ...	Gaseous.	Fan, ...	{ 20 x 6½ 20 x 6½ }	1.9	Gubal, ...	Steam, ...	.....	6	75,751	50,560	79,931	178	425
Mount Lookout, ...	Shaft, ...	Gaseous.	2 fans, ...	{ 20 x 6½ 17 x 5 }	2.5	Gubal, ...	Steam, ...	.....	6	121,939	115,600	131,060	423	288
Babylon, ...	Shaft, ...	Gaseous.	Fan, ...	{ 20 x 6½ 20 x 6½ }	1.1	Gubal, ...	Steam, ...	.....	3	69,800	58,210	70,330	126	554
Babylon, ...	Slope, ...	Non-gas.	Fan, ...	{ 12 x 4 12 x 4 }	.8	Gubal, ...	Steam, ...	.....	3	354,418	53,280	61,930	132	450
Del., Lack'a and West. R. R. Co.														
Haltstad,*	Shaft, ...	Gaseous.	2 fans, ...	{ 17 x 5 17 x 5 }	1.	Open, ...	.....	.....	.....	.....	.....	.....	.....	.....
Petroleum, ...	Shaft, ...	Gaseous.	Fan, ...	{ 35 x 10 35 x 10 }	2.1	Gubal, ...	Steam, ...	.....	.....	148,622	130,212	154,860	252	589
Avoca Coal Co.														
Avoca, ...	Shaft, ...	Non-gas.	Fan, ...	12 x 4	.6	Gubal, ...	Steam, ...	.....	6	95,600	35,500	104,000	283	363
W. G. Payne & Co.														
East Boston, ...	Shaft, ...	Gaseous.	2 fans, ...	{ 25 x 8 25 x 8 }	1.4	Gubal, ...	Steam, ...	.....	9	150,425	110,500	151,900	45	2,451
Clear Spring Coal Co.														
Clear Spring, ...	Shaft, ...	Gaseous.	2 fans, ...	{ 25 x 8 25 x 8 }	1.9	Gubal, ...	Steam, ...	.....	8	175,280	162,495	190,100	48	3,2
Traders' Coal Co.														
Ridgewood, ...	Slope, ...	Non-gas.	Fan, ...	16 x 5	.6	Gubal, ...	Steam, ...	.....	4	62,835	57,440	75,725	142	442
Stevens Coal Co.														
Stevens, ...	Slope, ...	Gaseous.	Fan, ...	20 x 6½	1.2	Gubal, ...	Steam, ...	.....	4	92,290	90,110	105,010	178	512
Stevens, ...	Shaft, ...	Gaseous.	Fan, ...	20 x 6½	.8	Gubal, ...	Steam, ...	.....	2	62,155	28,612	65,315	85	463

*Idle.

Lykens,	W. B. Gunton.	Drift, ...	Non-gas.	Furnace.	{ 6 x 2 12 x 4 }	.....	.....	.....	5x8	4	35,710	34,200	39,115	151	256
State Line and Sullivan R. R. Co.		Drift, ...	Non-gas.	2 fans,...	.8	.....	.....	Westinghouse, Guibal,	Steam, Steam,	4	101,500	78,900	106,210	236	429
Bernice,	Northern Anthracite Coal Co.	Shaft, ..	Non-gas.	Fan,.....	.6	.....	.....	Guibal,	Steam,	3	58,210	36,600	60,100	95	385
Murray,	Wm. Richmond.	Tunnel,...	Non-gas.	Furnace,	.....	.....	.....	.....	.....	5x8	2	21,358	18,273	81	259
Yatesville,	Robertson & Law.	Slope, ...	Non-gas.	Fan,.....	15 x 4 1/2	.4	.....	Guibal,	Steam,	2	45,300	25,000	44,200	119	380
Katy Dd.,	Hicks River Coal Co.	Tunnel,...	Non-gas.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Morning Star,* .....		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

*Idle.

The total number of fatal accidents in and about the mines of this district was 48.

Two fatal accidents occurred in the mines, however, which cannot be attributed to the mining of coal. The first victim, Anthony Sinik, was found unconscious in a gangway of the Exeter shaft, on February 11, his head having been split open with an axe, which was found beside him; he died in hospital. Two men were arrested for the crime, each of whom accused the other of doing the deed. They were tried and convicted for it.

The other fatal accident was to Benjamin Suber, a miner employed in Bernice drift, who went into the mine at night while intoxicated and was struck by a car and fatally injured.

Condition of the Collieries.

The collieries of this district are in a fairly good condition at present, as to ventilation, drainage, etc., which were impaired by the late strike at the mines. A number of local falls of roof took place on the main haulage roads, destroying, in a number of instances, the ventilating currents, while the mines were idle. However, all the collieries of this district have been cleaned up and placed in their former condition, with the exception of the East Boston shaft, operated by W. G. Payne & Co., which caved from the surface to red ash vein, in the lower workings, allowing a large inflow of water to the workings, which is giving the operators considerable anxiety. The other colliery was the Hallstead, operated by the Delaware, Lackawanna and Western Railroad Company, which was allowed to fill in the inside workings with water, and as no effort is being made to remove it the colliery remains idle.

Colliery Improvements.

A number of improvements have been made during the year and such as are necessary to increase the production of coal.

The No. 14 breaker of the Pennsylvania Coal Company, the destruction of which by fire was noticed in my last report as being under construction, has been finished, and started to prepare coal for market in October, 1902. Its capacity is twenty-five hundred tons per day. A new washery was built in connection, to clean the refuse from the main breaker.

The Lehigh Valley Coal Company's new breaker, at their Mineral Spring colliery, is about completed and is expected to be in operation by April or May, 1903. Two shafts are being sunk from the surface to Red Ash vein, which will supply the coal for the breaker in conjunction with the Mineral Spring and Coal Brook slopes.

This plant will be one of the largest in the valley when in full operation.

A new colliery is now operated by the Northern Anthracite Coal Company, called the Murray, located one mile north of the town of Lopez, in Sullivan county, consisting of two shafts sunk on the southeastern portion of the Bernice coal basin. A large breaker was built, which started up in the month of April, 1902. A 17-foot ventilating fan was erected over the second opening shaft, of the Guibal pattern, to furnish air for the inside workings. The railroad to breaker is the Lehigh Valley.

Examination for Mine Foreman.

The annual examination of applicants for certificates of qualification for mine foreman and assistant mine foreman was held in this district on the 24th, 25th and 26th of June, 1902, in Pittston, Pa.

The board of examiners was H. McDonald, Mine Inspector; Alexander McMillan and David P. Williams, miners.

Seventeen applicants for mine foreman certificates were examined, and the following named were recommended to the Secretary of Internal Affairs for certificates:

Frank Pardoe, John C. Williams, Horace G. Lewis, Fred. Gill and James M. Griffith, Pittston; Robert Bowen, Duryea; William Walker, Plainsville; David Griffith, Plains; Richard S. Evans, Wilkes-Barre; Morgan Bevan, Miners' Mills, and David Thomas, Dorranceton.

The following named received certificates for assistant mine foreman:

John Cawley, Michael J. Brady, William Pyne, Enoch Dykins, William Morgan, Dominic Gibbons, David Matthews, Thomas W. Jenkins, Henry Sayes, David D. Reese, Frederick A. Daw, John Ralston, Richard Jordan, John R. Roberts, John Golden, James Thomas, John J. Martin, Francis Taylor, Gwilym Williams, Edgar Ringsdorph, Thomas J. Deeble, William Bresnahan, Peter Parry, Dorrance Howell and Elias J. Giles.

TABLE 1.—Showing names of operators, railroads, etc., and location of collieries in the Third Anthracite District for the year 1902.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Pennsylvania Coal Co.						
Barnum No. 1 shaft,	Luzerne,	W. A. May,	Scranton,	Wm. W. Inglis,	Scranton,	Erie & Wyoming Valley.
Barnum No. 2 shaft,	Luzerne,	W. A. May,	Scranton,	Wm. W. Inglis,	Scranton,	Erie & Wyoming Valley.
Barnum No. 3 shaft,	Luzerne,	W. A. May,	Scranton,	Wm. W. Inglis,	Scranton,	Erie & Wyoming Valley.
Laws shaft,	Lackawanna,	W. A. May,	Scranton,	Wm. W. Inglis,	Scranton,	Erie & Wyoming Valley.
No. 9 shaft,	Luzerne,	W. A. May,	Scranton,	Wm. W. Inglis,	Scranton,	Erie & Wyoming Valley.
No. 10 shaft,	Luzerne,	W. A. May,	Scranton,	Wm. W. Inglis,	Scranton,	Erie & Wyoming Valley.
No. 8 shaft,	Luzerne,	W. A. May,	Scranton,	Wm. W. Inglis,	Scranton,	Erie & Wyoming Valley.
No. 1 shaft,	Luzerne,	W. A. May,	Scranton,	Wm. W. Inglis,	Scranton,	Erie & Wyoming Valley.
No. 5 shaft,	Luzerne,	W. A. May,	Scranton,	Wm. W. Inglis,	Scranton,	Erie & Wyoming Valley.
No. 11 shaft,	Luzerne,	W. A. May,	Scranton,	Wm. W. Inglis,	Scranton,	Erie & Wyoming Valley.
No. 4 shaft,	Luzerne,	W. A. May,	Scranton,	Wm. W. Inglis,	Scranton,	Erie & Wyoming Valley.
No. 7 shaft,	Luzerne,	W. A. May,	Scranton,	Wm. W. Inglis,	Scranton,	Erie & Wyoming Valley.
Hoyle shaft,	Luzerne,	W. A. May,	Scranton,	Wm. W. Inglis,	Scranton,	Erie & Wyoming Valley.
No. 14 shaft,	Luzerne,	W. A. May,	Scranton,	Wm. W. Inglis,	Scranton,	Erie & Wyoming Valley.
No. 14 tunnel,	Luzerne,	W. A. May,	Scranton,	Wm. W. Inglis,	Scranton,	Erie & Wyoming Valley.
No. 6 washery,	Luzerne,	W. A. May,	Scranton,	Wm. W. Inglis,	Scranton,	Erie & Wyoming Valley.
No. 8 washery,	Luzerne,	W. A. May,	Scranton,	Wm. W. Inglis,	Scranton,	Erie & Wyoming Valley.
Lehigh Valley Coal Co.						
Presswood shaft,	Luzerne,	D. Warriner,	Wilkes-Barre,	F. E. Zerby,	Wilkes-Barre,	Lehigh Valley.
Oakwood shaft,	Luzerne,	D. Warriner,	Wilkes-Barre,	F. E. Zerby,	Wilkes-Barre,	Lehigh Valley.
Midvale slope,	Luzerne,	D. Warriner,	Wilkes-Barre,	F. E. Zerby,	Wilkes-Barre,	Lehigh Valley.
Hillman slope,	Luzerne,	D. Warriner,	Wilkes-Barre,	F. E. Zerby,	Wilkes-Barre,	Lehigh Valley.
Henry shaft,	Luzerne,	D. Warriner,	Wilkes-Barre,	F. E. Zerby,	Wilkes-Barre,	Lehigh Valley.
Henry washery,	Luzerne,	D. Warriner,	Wilkes-Barre,	F. E. Zerby,	Wilkes-Barre,	Lehigh Valley.
Exeter No. 1 shaft,	Luzerne,	D. Warriner,	Wilkes-Barre,	F. E. Zerby,	Wilkes-Barre,	Lehigh Valley.
Exeter No. 2 shaft,	Luzerne,	D. Warriner,	Wilkes-Barre,	F. E. Zerby,	Wilkes-Barre,	Lehigh Valley.
Heidelberg No. 1 slope,	Luzerne,	D. Warriner,	Wilkes-Barre,	F. E. Zerby,	Wilkes-Barre,	Lehigh Valley.
Heidelberg No. 2 shaft,	Luzerne,	D. Warriner,	Wilkes-Barre,	F. E. Zerby,	Wilkes-Barre,	Lehigh Valley.
Maltby shaft,	Luzerne,	D. Warriner,	Wilkes-Barre,	F. E. Zerby,	Wilkes-Barre,	Lehigh Valley.
Malby slope,	Luzerne,	D. Warriner,	Wilkes-Barre,	F. E. Zerby,	Wilkes-Barre,	Lehigh Valley.
Mineral Spring slope,	Luzerne,	D. Warriner,	Wilkes-Barre,	F. E. Zerby,	Wilkes-Barre,	Lehigh Valley.
Coal Brook slope,	Luzerne,	D. Warriner,	Wilkes-Barre,	F. E. Zerby,	Wilkes-Barre,	Lehigh Valley.
Hillside Iron and Coal Co.						
Consolidated slope,	Luzerne,	W. A. May,	Scranton,	V. L. Peterson,	Scranton,	Erie & Wyoming Valley.

Consolidated shaft,	Luzerne,	W. A. May,	Scranton,	V. L. Peterson,	Scranton,	Erie & Wyoming Valley.
Butler tunnel,	Luzerne,	W. A. May,	Scranton,	V. L. Peterson,	Scranton,	Erie & Wyoming Valley.
Cherry shaft,	Luzerne,	W. A. May,	Scranton,	V. L. Peterson,	Scranton,	Erie & Wyoming Valley.
Fernwood shaft,	Luzerne,	W. A. May,	Scranton,	V. L. Peterson,	Scranton,	Erie & Wyoming Valley.
Pittston washery,	Luzerne,	W. A. May,	Scranton,	V. L. Peterson,	Scranton,	Erie & Wyoming Valley.
Temple Iron Co.						
Mount Lookout shaft,	Luzerne,	S. B. Thorne,	Scranton,	George Steele,	West Pittston,	Lehigh Valley
Harry E. shaft,	Luzerne,	S. B. Thorne,	Scranton,	George Steele,	West Pittston,	Lehigh Valley
Forty foot shaft,	Luzerne,	S. B. Thorne,	Scranton,	George Steele,	West Pittston,	Lehigh Valley
Babylon shaft,	Luzerne,	S. B. Thorne,	Scranton,	George Steele,	West Pittston,	Lehigh Valley
Babylon slope,	Luzerne,	S. B. Thorne,	Scranton,	George Steele,	West Pittston,	Lehigh Valley
Delaware & Hudson Co.						
Delaware shaft,	Luzerne,	C. C. Rose,	Scranton,	E. R. Pettebone,	Scranton,	Delaware & Hudson.
Hudson Coal Co.						
Langcliffe shaft,	Luzerne,	C. C. Rose,	Scranton,	E. R. Pettebone,	Scranton,	Delaware & Hudson.
Langcliffe tunnel,	Luzerne,	C. C. Rose,	Scranton,	E. R. Pettebone,	Scranton,	Delaware & Hudson.
Langlin shaft,	Luzerne,	C. C. Rose,	Scranton,	E. R. Pettebone,	Scranton,	Delaware & Hudson.
Langlin tunnel,	Luzerne,	C. C. Rose,	Scranton,	E. R. Pettebone,	Scranton,	Delaware & Hudson.
Pine Ridge shaft,	Luzerne,	C. C. Rose,	Scranton,	E. R. Pettebone,	Scranton,	Delaware & Hudson.
Laurel Run slope,	Luzerne,	C. C. Rose,	Scranton,	E. R. Pettebone,	Scranton,	Delaware & Hudson.
Del., Lack. & West. R. R. Co.						
Hallstead shaft,	Luzerne,	R. A. Phillips,	Scranton,	E. J. Evans,	Scranton,	Del., Lack. & Western.
Pettebone shaft,	Luzerne,	R. A. Phillips,	Scranton,	Montrose Barnard,	Wilkes-Barre,	Del., Lack. & Western.
Seneca Coal Co.						
Twin No. 1 shaft,	Luzerne,	S. D. Warriner,	Wilkes-Barre,	F. E. Zerby,	Wilkes-Barre,	Lehigh Valley.
Twin No. 2 shaft,	Luzerne,	S. D. Warriner,	Wilkes-Barre,	F. E. Zerby,	Wilkes-Barre,	Lehigh Valley.
Columbia shaft,	Luzerne,	S. D. Warriner,	Wilkes-Barre,	F. E. Zerby,	Wilkes-Barre,	Lehigh Valley.
Raub Coal Co.						
Louise slope,	Luzerne,	S. J. Tonkins,	Luzerne,			Lehigh Valley
Louise tunnel,	Luzerne,	S. J. Tonkins,	Luzerne,			Lehigh Valley.
State Line & Sullivan R. R. Co.						
Bernice drift,	Sullivan,	O. A. Baldwin,	Towanda,	R. E. Dunston,	Bernice,	Lehigh Valley.
W. B. Gunton.						
Lykens drift,	Sullivan,	W. B. Gunton,	Bernice,			Lehigh Valley.
Murray shaft,	Sullivan,	M. J. Murray,	Dunmore,	P. H. Mongan,	Lopez,	Lehigh Valley.
Northern Anthracite Coal Co.						
Stevens Coal Co.						
Stevens shaft,	Luzerne,	H. W. Kingsbury,	Scranton,	D. W. Evans,	Pittston,	Lehigh Valley.
Stevens slope,	Luzerne,	H. W. Kingsbury,	Scranton,	D. W. Evans,	Pittston,	Lehigh Valley.
Wyoming Coal and Land Co.						
Griffith tunnel,	Luzerne,	F. H. Clemens,	Scranton,	S. F. Williams,	Wyoming,	Lehigh Valley.
Gardner Coal Co.						
Clarence shaft,	Luzerne,	C. B. Sturges,	Scranton,			New York & Erie.
Gardner Creek tunnel,	Luzerne,	C. B. Sturges,	Scranton,			

TABLE I—Continued.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
John C. Haddock. Black Diamond shaft,	Luzerne,	Jas. B. Davis,	Plymouth, .....	.....	.....	Del., Lack. & Western.
Clear Spring Coal Co. Clear Spring shaft,	Luzerne,	J. L. Cake,	Pittston, .....	.....	.....	Del., Lack. & Western.
W. G. Payne & Co. East Boston shaft,	Luzerne,	Wm. E. Payne, ..	Kingston,	W. O. Williams, ..	Dorrancton,	Del., Lack. & Western.
Traders Coal Co. Ridgewood slope,	Luzerne, .....	.....	.....	Solomon Ischelle, ..	Avoca,	N. Y. & W., and C. R. R. of N. J.
Avoca Coal Co., Limited. Avoca shaft,	Luzerne,	W. H. Hollister, ..	Avoca,	Wm. J. Buglehall, ..	Avoca,	L. V. & E., and W. V.
Robertson & Law. Katy Dd slope,	Luzerne,	J. M. Robertson, ..	Moosic, .....	.....	.....	Erle & Wyoming.
Wm. Richmond. Yatesville tunnel,	Luzerne,	Wm. Richmond, ..	Seranton, .....	.....	.....	New York & Erle.
Warnke Coal Co. Warnke washery,	Luzerne,	Fred. Warnke,	Seranton, .....	.....	.....	Del., Lack. & Western.

TABLE II.—Gives the total number of tons of coal mined in each colliery, number of days worked, number of employes, number of employes killed and injured, number of kegs of powder, etc., used in the Third Anthracite District for the year ending December 31, 1902.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employes—tons.	Total production of coal in tons.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Pennsylvania Coal Co.												
Barnum Nos. 1, 2 and 3 shafts,	Luzerne.	188,176	6,794	.....	194,970	110.60	710	1	1	7,395	310	66
Lewis and No. 13 shaft,	Luzerne.	144,519	9,448	.....	153,967	111.30	587	.....	.....	3,521	1,026	62
Nos. 9, 10 and 11, Jr., shafts,	Luzerne.	152,781	19,643	.....	172,663	117.90	66	2	.....	3,331	8.0	70
Nos. 1 and 8 shafts,	Luzerne.	106,582	2,795	.....	109,777	110	41	.....	.....	3,097	869	51
Nos. 4, 7 and Hoyte shafts,	Luzerne.	173,975	17,587	.....	191,062	93.70	742	1	1	1,758	1,758	74
Nos. 5, 6 and 11 shafts,	Luzerne.	152,281	8,539	.....	170,200	98.20	701	.....	.....	6,787	6,433	78
No. 14, shaft and tunnel,	Luzerne.	66,977	3,015	.....	65,062	92.90	616	.....	.....	2,147	235	48
No. 6 washery,	Luzerne.	102,710	21,888	.....	123,898	93.40	41	.....	.....	.....	.....	.....
No. 8 washery,	Luzerne.	136,266	13,477	.....	149,382	235.10	47	.....	.....	.....	.....	.....
Totals,	.....	1,233,916	102,775	.....	1,335,891	127.70	4,569	4	15	35,021	12,299	459
Lehigh Valley Coal Co.												
Prospect shaft,	Luzerne.	.....	.....	1,227	264,733	125.55	428	1	.....	5,573	21,113	111
Oakwood shaft,	Luzerne.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wyoming shaft,	Luzerne.	229,026	23,589	.....	.....	.....	.....	.....	.....	.....	.....	.....
Holman shaft,	Luzerne.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Medvale shaft,	Luzerne.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Henry shaft,	Luzerne.	304,124	15,729	5,475	325,333	220.10	576	3	33	3,615	17,692	101
Freder Nos. 1 and 2 shaft,	Luzerne.	347,855	17,629	6,826	372,110	113.75	671	3	.....	5,533	12,125	106
Heidelberg shaft,	Luzerne.	35,207	11,702	1,848	68,947	78.90	582	.....	.....	1,800	2,049	42
Holburn shaft,	Luzerne.	63,661	8,536	.....	65,397	66	216	1	.....	3,800	3,800	85
Mattie shaft and slope,	Luzerne.	49,410	16,159	1,001	66,561	64	222	.....	.....	2,093	3,823	20
Mineral Shaft slope,	Luzerne.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Coal Brook slope,	Luzerne.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals,	.....	990,574	82,486	10,377	1,063,336	425.30	3,871	10	23	21,403	118,905	722

Totals in this column are averages.

TABLE II.—Continued.

Name of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Hillside Coal and Iron Co.												
Consolidated slope and shaft.	Luzerne.	126,871	6,829	814	124,505	126.45	642	1	1	4,698	2,067	67
Bailew tunnel and Chapman shaft.	Luzerne.	80,811	11,381	988	93,190	110.82	415	1	1	3,154	2,492	52
Fernwood tunnel and shaft.	Luzerne.	48,131	9,060	437	57,568	62.90	355	1	1	2,852	5,635	54
Pittston washery.	Luzerne.	242,318	3,256	.....	245,574	181.45	66	1	1	.....	.....	.....
Elmwood washery.	Luzerne.	7,928	1,000	.....	8,928	34.40	.....	1	.....	.....	.....	.....
Totals.		506,059	31,457	2,219	559,735	117.80	1,473	3	3	10,894	13,564	173
Delaware and Hudson Co.												
Delaware shaft.	Luzerne.	61,479	11,892	1,307	74,678	86.30	357	.....	.....	2,975	1,520	44
Hudson Coal Co.												
Pine Ridge slope.	Luzerne.	24,381	11,060	749	49,190	48.20	583	.....	5	1,800	1,050	68
Laurel Run shaft.	Luzerne.	12,809	1,222	881	14,953	23.29	290	.....	1	722	100	55
Laurel Run shaft.	Luzerne.	17,800	1,353	1,348	20,553	37.10	125	1	.....	1,175	4,352	30
Langcliffe tunnel and shaft.	Luzerne.	29,629	3,174	684	44,487	73.50	318	.....	3	2,608	1,243	60
Totals.		100,200	33,551	3,062	137,673	47	1,277	1	9	5,705	6,745	213
Temple Iron Co.												
Mount Lookout shaft.	Luzerne.	96,034	25,174	4,850	126,058	116.80	519	3	6	6,304	6,155	86
Harry E. shaft.	Luzerne.	182,648	27,629	2,808	213,495	131.20	549	4	3	4,977	2,355	63
Forty Fort shaft.	Luzerne.	.....	.....	.....	.....	.....	220	1	1	2,215	1,000	32
Babylon slope and shaft.	Luzerne.	29,220	6,223	.....	45,443	73.95	126	1	3	1,330	600	51
Totals.		317,932	59,696	7,658	384,626	108.30	1,514	8	13	14,726	10,650	232
Del., Lack., and West. R. R. Co.												
Ballston shaft.	Luzerne.	9,081	1,274	575	10,930	25.70	.....	.....	1	461	465	39

Totals in this column are averages.

Pettebone shaft,	Luzerne,	116,175	9,249	4,756	130,171	80.45	695	1	6	3,127	2,827	75
Totals,		125,256	10,514	5,331	141,101	53	605	1	7	3,188	3,292	114
Seneca Coal Co. Twin Nos. 1 and 2 and Columbia shaft, ..	Luzerne,	142,649	11,039	8,020	161,708	120.60	725	7	9	8,017	573	95
Raub Coal Co., Limited. Louise slope and tunnel,	Luzerne,	49,479	10,680	9,029	69,168	80.60	359	.....	5	2,242	7,000	40
John C. Haddock. Black Diamond shaft,	Luzerne,	45,212	22,000	2,294	69,506	89.90	282	1	.....	1,300	5,500	20
Clear Spring Coal Co. Clear Spring shaft,	Luzerne,	122,495	9,000	11,050	143,545	143.90	592	3	4	5,261	4,600	83
W. G. Payne & Co. East Boston shaft,	Luzerne,	52,566	5,295	4,920	62,752	59.10	67	2	7	1,883	700	44
Traders Coal Co. Ridgewood slope,	Luzerne,	48,718	2,600	2,418	53,136	114.45	337	.....	1	3,306	1,000	42
Avoca Coal Co., Limited. Avoca shaft,	Luzerne,	48,610	9,000	4,157	61,767	119	375	.....	2	2,309	1,700	50
Robertson & Law. Katy Dd slope,	Luzerne,	49,649	1,750	712	52,111	121.25	196	.....	1	1,527	4,797	24
Algonquin Coal Co. Pine Ridge shaft,	Luzerne,	60,843	10,000	5,439	76,282	77	.....	2	1	2,650	2,847	.....
Laurel Run Coal Co. Laurel Run slope,	Luzerne,	24,065	2,000	4,018	31,083	46	.....	1	.....	1,281	295	.....
State Line and Sullivan R. R. Co. Bernie drift,	Sullivan,	185,229	6,788	982	192,999	288	408	3	5	6,000	4,000	47
W. R. Gunton. Lykens drift,	Sullivan,	123,095	900	2,545	126,540	207.70	208	1	2	2,245	.....	21
Northern Anthracite Coal Co. Murray shaft,	Sullivan,	35,728	8,985	942	45,655	179	126	1	1	1,600	600	12
Stevens Coal Co. Stevens shaft and slope,	Luzerne,	86,727	20,060	2,801	109,528	131.80	367	.....	5	4,488	10,075	57
Wyoming Coal and Land Co. Griffith tunnel,	Luzerne,	45,910	5,000	1,929	52,439	109.15	201	.....	.....	2,594	2,475	25
Clarence Coal Co. Gardner Creek tunnel,	Luzerne,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Figures in italics are averages.

TABLE II—Continued.

Names of Operators and Collieries.	County.	Number of Boilers.			Total horse power.			Locomotives			Number steam engines of all classes.	Total horse power.	Number pumps delivering water to surface.	Capacity in gallons per minute.	Quantity delivered to surface per minute—gallons.	Number electric dynamos.	Number air compressors.
		Cylindrical.	Horse power.	Tubular.	Horse power.	Steam.			Air.	Electric.							
Pennsylvania Coal Co.,	Luzerne,	35	1,410	57	8,480	9,890	11	5	3	182	9,979	24	20,108	10,420	4		
Loblitz Valley Coal Co.,	Luzerne,	30	877	35	6,150	7,027	13		1	113	15,827	22	13,393	10,431	4		
Hillside Coal and Iron Co.,	Luzerne,	19	545	25	2,170	2,655	6			44	2,974	14	6,299	2,730			
Delaware and Hudson Co.,	Luzerne,	15	410	5	750	1,200				29	960	1	3,000	1,600			
Hudson Coal Co.,	Luzerne,	9	270	14	2,450	2,720	2			39	2,380	6	4,250	3,285			
Temple Iron Co.,	Luzerne,	21	540	20	5,830	5,870	4		3	70	4,914	14	13,900	6,120	3		
Bel, Lackawanna and Western R. R. Co.,	Luzerne,	41	1,000	8	1,010	2,040				29	2,374	8	7,000	3,200	3		
Miscellaneous Coal Cos.,	Luzerne,	68	1,883	81	10,207	12,090	9	2	2	156	10,921	29	20,695	14,030	3		
Totals,		298	6,915	245	36,577	43,492	45	7	9	653	50,399	118	90,546	51,816	12		20

TABLE III.—Showing the number of employees at each colliery in the Third Anthracite District, during the year 1902.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.										Grand total, inside and outside.
		Total inside.										Total outside.										
		Mine foremen.	Assistant mine foremen.	Fire bosses and assistants.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	Pumpmen.	Company men.	All other employees.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	Slate pickers (boys).	Slate pickers (men).	Book-keepers and clerks.	All other employees.	Total outside.		
Pennsylvania Coal Co.																						
Barnum Nos. 1, 2 and 3 shafts.	Luzerne.	17	1	23	1,344	1,163	463	110	13	211	57	3,452	9	40	131	222	217	24	564	1,147	4,599	
Laws and No. 13 shaft.	Luzerne.																					
Nos. 9, 10 and 10 Jr. shafts.	Luzerne.																					
Nos. 1 and 8 shafts.	Luzerne.																					
Nos. 3, 7 and Hoyte shafts.	Luzerne.	1	1	1	297	189	63	13	4	19	15	493	1	4	24	38	35	2	63	167	660	
Nos. 5, 6 and 11 shafts.	Luzerne.	3	3	256	172	130	43	7	2	32	15	513	1	7	21	22	48	4	63	162	415	
Nos. 14 shaft and tunnel.	Luzerne.	3	216	178	178	96	26	1	48	17	15	576	1	1	51	33	63	5	59	169	757	
No. 6 washery.	Luzerne.	4	297	153	59	11	2	47				486	1	5	19	16	13	3	73	130	616	
No. 8 washery.	Luzerne.												1	1	2	1		1	50	61	61	
Totals.		17	1	23	1,344	1,163	463	110	13	211	57	3,452	9	40	131	222	217	24	564	1,147	4,599	
Lehigh Valley Coal Co.																						
Preston shaft.	Luzerne.																					
Oakwood shaft.	Luzerne.																					
Wyoming shaft.	Luzerne.	3	7	183	163	90	90	35	5	21	130	639	1	10	18	23		4	233	289	928	
Hillman slope.	Luzerne.																					
Mulvale slope.	Luzerne.																					
Heary washery and shaft.	Luzerne.	1	2	4	129	101	55	19	3	64		378	1	25	23	5		3	141	188	576	
Exeter Nos. 1 and 2 shaft.	Luzerne.	1	1	1	162	122	66	11	5	71		473	1	20	16	30	5	3	122	198	671	
Reddberg shaft.	Luzerne.	1	1	1	60	50	25	1	2		18	159	1	2	9	55	5	4	48	123	282	
Heddelberg slope.	Luzerne.	1	1	1	61	46	30		1		24	164	1	5	6	62	4	3	65	146	310	
Manthey shaft, slope and tunnel.	Luzerne.	1	1	6	219	90	80	13	3	50	68	512	1	35	12	36	6	3	147	249	762	
Mineral Springs, 2 slopes.	Luzerne.	1	1	1	16	31	6				15	70	1	95	12			2	175	285	355	
Totals.		9	7	24	851	673	352	79	19	296	245	2,395	1	7	96	211	20	21	801	1,479	2,874	

TABLE III.—Continued.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.										Grand total, inside and outside.
		Mine foremen.	Assistant mine foremen.	Fire bosses and assistants.	Miners.	Miners' laborers.	Drivers and runners.	Deer boys and helpers.	Pumpmen.	Company men.	All other employes.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers (boys).	State pickers (men).	Book-keepers and clerks.	All other employes.	Total outside.	
Robertson & Law. Katy lead slope.	Luzerne.	1			52	50	18	4	1	3	10	139	1	1	1	8	24		2	18	57	196
Allegan Coal Co.* Pine Ridge shaft.	Luzerne.																					
Laurel Run Coal Co.* Laurel Run slope.	Luzerne.																					
State Line & Sullivan R. R. Co. Bernice drift.	Sullivan.	1	1		263	15	25	8	4	7	21	285	1	1	13	13	15	5	3	72	132	408
Lykens drift. W. E. Gunton.	Sullivan.	1			69	60	19			10	10	151	1			2	20	10	2	20	57	208
Northern Anthracite Coal Co. Murray shaft.	Sullivan.	1	1		39	39	10	4	1	10		87	1	2	2	5	10	8	1	20	49	136
Shesons Coal Co. Shesons shaft and slope.	Luzerne.	2	1	2	94	80	41	8	4	10	21	262	1	1	6	13	18	8	2	55	101	367
Wyoming coal and land Co. Griffith tunnel.	Luzerne.	1	1	1	68	32	20	5	2	11	3	114	1	1	5	7	14	4	2	33	57	201
Wm. Richmond Vidossich tunnel.	Luzerne.	1			35	35	10	2		4		89		1	2	2	18		1	8	35	124

*Compiled by Hudson Coal Co. May 1

TABLE IV—List of fatal accidents that occurred in and about the mines of the Third Anthracite District for the year ending December 31, 1902.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan. 2	Michael Binch,	Austrian,	Laborer,	20	S.	.....	.....	Pine Ridge shaft,...	Luzerne,.	Killed by falling down shaft; got off the cage while descending in some manner not known.
9	Thos. Lucashie,	Austrian,	Slate picker,	15	S.	.....	.....	Heidelberg breaker,	Luzerne,.	Fatally injured by falling off roof of breaker where he was playing. Died next day.
18	Andrew Mayho,	Hungarian,	Miner,	35	M.	1	4	Barnum No. 3,	Luzerne,.	Fatally injured by a blast he was firing in cross-cut. He cut the match too short and failed to get to a place of safety. Died next day.
22	Anthony Sapiego,	Polish,	Miner,	32	M.	1	2	Exeter No. 1,	Luzerne,.	Fatally injured by fall of rock in a breast. Died next day.
23	Edgar Langan,	American,	Helper, Eng. Corps,	20	S.	.....	.....	Twin No. 2 shaft,...	Luzerne,.	These three men were fatally burned by an explosion of gas in the Marcy Vein. The men went to make a survey of a part of the workings which had been abandoned, and were accompanied by the fire boss. While passing through the shaft, the fire boss stepped up into a breast to examine it, one of the men went up into the outside one to place his marks on roof, and ignited a small body of gas. They were instructed by the fire boss not to go into any breast until he had first examined it. Langan died January 31st; Burk January 27th, and Davies the same day of the accident.
23	Joseph Burk,	American,	Helper, Eng. Corps,	33	S.	.....	.....	Twin No. 2 shaft,...	Luzerne,.	
23	Benjamin Davies,	American,	Helper, Eng. Corps,	24	S.	.....	.....	Twin No. 2 shaft,...	Luzerne,.	
25	Ulrick Kolbeck,	German,	Miner,	48	M.	1	3	No. 4 shaft,	Luzerne,.	Fatally burned by an explosion of gas; went into an old abandoned breast and ignited the gas. Died January 31th.

TABLE IV — Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
31	Martin Ward,	Irish,	Stone mason	47	M.	1	4	Twin No. 1 shaft, ..	Luzerne, ..	Killed by falling down the shaft from Pittston to Red Ash Vein. Ward went on the cage and signalled the engineer to hoist the carriage, which was done, and in a few seconds after his body was taken out of the cage pit.
Feb. 6	Lawrence Madden,	Irish,	Miner,	40	M.	1	5	Harry E. shaft,	Luzerne, ..	Fatally injured by fall of rock. He and his laborer tried to take the rock down but failed. So thinking it safe went under it to work, when it fell on him. Died next day.
11	Anthony Yokawanis, ...	Russian,	Miner,	40	M.	1	2	East Boston shaft, ..	Luzerne, ..	Fatally injured by fall of coal and rock.
12	Frank Lantz,	American,	Driver,	18	S.	.....	.....	Bernice drift,	Sullivan, ..	Fatally injured by fall of coal and rock.
17	John Pedro,	Hungarian,	Shaft sinker	26	M.	1	1	Henry New shaft, ...	Luzerne, ..	Killed by falling in front of cars on gangway road.
March 4	Anthony Mezleskie,	Polish,	Laborer, ...	35	M.	1	2	Black Diamond shaft	Luzerne, ..	Fatally injured in sinking shaft; hoisting rope broke, allowing the bucket to descend, the flying rock striking him. Died same day.
10	Lewis Smith,	German,	Miner,	35	M.	1	4	Mt. Lookout shaft, ..	Luzerne, ..	Killed by fall of coal while preparing to stand a prop.
17	Wm. Fredrick,	German,	Slate picker, 15	S.	.....	.....	.....	Clear Spg. breaker, ..	Luzerne, ..	Fatally injured by fall of rock at face of shaft; left his work and climbed to top of breaker where a line of elevators were being constructed, and his clothing caught on line shafting, which was not secured to the shaft.
17	Mike Balago,	Polish,	Laborer, ...	18	S.	.....	.....	Pine Ridge, outside	Luzerne, ..	Killed; head caught between culm car and door frame of boiler room, while car was being pushed out of boiler room, he got on front of car to ride out; his head was caught against top frame and his neck broken.

18	Patrick Joyce,	Irish,	Miner,	43	M	1	1	Exeter No. 1 shaft,	Luzerne, ..	Fatally injured by fall of coal and rock while taking out pillars. Died March 23d.
21	Adam Salnofskie, ..	Polish,	Laborer,	31	S	...	...	Columbia shaft,	Luzerne, ..	Killed by falling down shaft from Marcy to Red Ash vein; attempted to get in the cage after the signal was given the engineer.
24	Vincent Barons,	Italian,	Laborer,	40	M	1	1	Exeter No. 2,	Luzerne, ..	Killed by fall of rock after firing a blast.
24	Walter Kashauba, ..	Polish,	Laborer,	30	M	1	4	Columbia shaft,	Luzerne, ..	Killed by fall of rock at face of breast.
25	James Munley,	Irish,	Co. laborer,	55	S	...	...	Henry shaft,	Luzerne, ..	Killed by loaded car which ran down a breast. Munley opened the door to allow the car through and was caught.
25	Andrew Martin,	Hungarian,	Laborer,	35	M	1	3	Laurel Run slope, ..	Luzerne, ..	Killed by fall of roof while drawing pillars. His miner ordered him out, but he wanted to finish loading a car, and was caught by fall.
27	Maek Yackman,	Hungarian,	Laborer,	32	M	1	...	Ladlin shaft,	Luzerne, ..	Killed by fall of roof on gangway road at face.
8	Mick Raynock,	Russian,	Laborer,	40	S	...	...	Wyoming shaft, ...	Luzerne, ..	Fatally burned by gas; went into an abandoned breast and ignited a small quantity of gas. Died April 11th.
8	Wm. Palmer,	English,	Miner,	62	M	1	3	Harry E. shaft, ...	Luzerne, ..	Fatally injured by a blast. Died April 11th.
14	John Marriell,	Polish,	Laborer,	28	S	...	...	Butler shaft,	Luzerne, ..	Killed by fall of rock while cleaning from around pillar.
14	Tony Frenshand,	Italian,	Car loader at breaker, ..	35	M	1	2	Clear Spg. breaker, ..	Luzerne, ..	Killed by railroad car under breaker chutes by a runaway empty car from the track above.
28	Daniel Sullivan,	American,	Mine foreman,	40	M	1	8	Mt. Lookout shaft, ..	Luzerne, ..	Killed by fall of rock at foot of air shaft while waiting for cage to be hoisted.
29	Daniel Collins,	Irish,	Miner,	39	M	1	1	No. 10 shaft,	Luzerne, ..	Killed by fall of rock while robbing pillar in Marcy shaft.
29	Charles Ruane,	Irish,	Laborer,	1	S	...	...	No. 10 shaft,	Luzerne, ..	Killed by fall of rock in face of breast.
30	Marion Lockenton, ..	Italian,	Laborer,	20	M	1	2	Babylon tunnel,	Luzerne, ..	Killed by falling in front of loaded car that he was bringing out of the gangway.
5	James Shovelin,	Irish,	Driver,	16	S	...	...	Hillman slope,	Luzerne, ..	Killed by falling against the fly wheel of engine on culm bank.
20	James Dickson,	American,	Engineer,	20	S	...	...	Elmwood washery, ..	Luzerne, ..	Fatally injured while backing a trip of loaded mine cars on gangway road.
7	Peter Mahoe,	American,	Madorman,	27	M	1	...	Bernice drift,	Sullivan, ..	Killed by fall of coal and slate at face of breast.
22	Anthony Shields,	Polish,	Miner,	8	S	...	...	Bernice drift,	Sullivan, ..	Fatally burned by gas; went down to Marcy vein and ignited gas. Died next day.
2	Delph Brown,	German,	Laborer,	2	S	...	...	Mt. Lookout shaft, ..	Luzerne, ..	Fatally injured by a fall of rock and coal while attempting to secure the same. Died same day.
17	Morgan Peymon,	Welsh,	Miner, .....	...	W	...	5	Lykens drift,	Sullivan, ..	Fatally injured by coal falling from the side. Died same day.
3	Peter Russell,	American,	Laborer, .....	...	M	1	2	East Boston shaft, ..	Luzerne, ..	Instantly killed by fall of rock at face of breast, caused by slips in the roof.
25	John Machalonis,	Polish,	Laborer,	5	S	...	...	Clear Spring shaft, ..	Luzerne, ..	

TABLE IV—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
20	Richard Owens,	Welsh,	Driver,	17	S.	.....	.....	Pettebone shaft, ..	Luzerne,.	Killed by fall of rock; while helping the runner to run a loaded car out of breast it knocked a prop out, allowing the rock to fall by fall of rock while standing props.
6	George Markalls,	Polish,	Miner,	35	S.	.....	.....	Henry shaft,	Luzerne,.	Smothered in coal chute in breaker.
9	Fred Hawk,	Irish,	Slate picker, 13	13	S.	.....	.....	Harry E. breaker,.	Luzerne,.	Fatally injured; stood under descending cage in shaft. Died Jan. 13th, 1903.
19	George Golaowski,	Polish,	Laboret, ... 43	43	M.	1	4	Harry E. shaft, ...	Luzerne,.	Fatally injured; knocked off trestle by timber falling from truck. Died next day.
22	Michael Zadrin,	Italian,	Car oiler, ... 45	45	M.	1	1	Seneca, outside, ...	Luzerne,.	Fatally injured by fall of rock at face of breast.
23	John Hodic,	Slavonic,	Laborer, ... 28	28	M.	1	4	Murray shaft,	Sullivan,.	Fatally injured; thrown out of wagon by train running away. Died next day.
24	Wm. Costello,	American,	Teamster,	17	S.	.....	.....	Mineral Spring, out- side,	Luzerne,.	Killed while coming up the slope by a runaway trip of cars.
30	Elwood Richmond,	American,	Driver,	15	S.	.....	.....	Consolidated slope,.	Luzerne,.	

TABLE V—List of non-fatal accidents that occurred in and about the mines of the Third Anthracite District for the year ending December 31, 1902.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan. 6	James Bannan,	Irish,	Runner,	18	S.	Twin No. 1 shaft,	Luzerne,	Leg bruised by car while unhitching mule.
7	Joe Kosloski,	Polish,	Miner,	40	M.	Twin No. 2 shaft,	Luzerne,	Face and hands slightly burned by gas.
10	Joe Whalen,	American,	Doorboy,	14	S.	No. 7 shaft,	Luzerne,	Face burned by powder he took from a miner and ignited it.
12	Elmer Banta,	American,	Laborer,	24	S.	Louise slope,	Luzerne,	Head injured by fall of rock.
13	Bert Lane,	American,	Driver,	15	S.	No. 13 shaft,	Lack a,	Leg broken by his mule stepping on him, causing him to fall.
13	James White,	Scotch,	Dumper,	16	S.	Ewen breaker,	Luzerne,	Leg cut off caught between car bumpers.
15	Joe Gletus,	Lithuanian, ..	Miner,	28	S.	Columbia shaft,	Luzerne,	Blow fractured by flying coal from a blast.
15	John Yacutavich,	Slavonic,	Miner,	31	M.	Exeter No. 2 shaft,	Luzerne,	Injured by premature blast.
17	Joe Kelley,	Polish,	Laborer,	23	S.	Twin No. 1 shaft,	Luzerne,	Face burned by powder while making cartridge with lamp on his cap.
18	Joe Linsner,	Slavonic,	Shaft footman, ..	22	S.	Prospect shaft,	Luzerne,	Fingers crushed by car wheel while blocking it.
21	Michael Voklin,	Slavonic,	Footman,	34	M.	East Boston shaft,	Luzerne,	Shoulder painfully bruised by ice falling down shaft.
23	John Lewis,	American,	Engineer corps, ..	20	S.	Twin No. 2 shaft,	Luzerne,	Face and hands burned by an explosion of gas while making survey in abandoned workings.
23	Thos. Jones,	American,	Engineer corps, ..	30	S.	Twin No. 2 shaft,	Luzerne,	Leg broken by car bumpers while attempting to uncouple them.
24	Harry Draul,	English,	Driver,	17	S.	Mt. Lookout shaft,	Luzerne,	Heavily bruised by falling from a blast.
27	Wm. Siley,	American,	Fire inspector, ..	36	S.	Midvale slope,	Luzerne,	Head and shoulders bruised while riding on loaded car between coal and roof.
27	Wm. Phillips,	Welsh,	Doorboy,	15	S.	Pettebone shaft,	Luzerne,	Head and shoulders bruised while riding on loaded car between coal and roof.
28	George Materina,	Slavonic,	Miner,	45	M.	East Boston shaft,	Luzerne,	Leg bruised by fall of rock.
31	John Slawogardie,	Hungarian,	Plateman,	45	M.	Louise breaker,	Luzerne,	Arm broken and body bruised between cars while uncoupling.
5	Andrew Dozenkle,	Austrian,	Driver,	14	S.	Central breaker,	Luzerne,	Injured while uncoupling culm cars on bank.
6	Geo. Timmis,	American,	Doorboy,	15	S.	East Boston shaft,	Luzerne,	Kicked by mule.
6	Charles Miller,	Polish,	Car loader,	52	M.	Langcliffe breaker,	Luzerne,	Ankle bruised; struck by plank while unloading car.

TABLE V Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
1	Geo. Farrir,	Italian,	Laborer,	27	M.	Stevens shaft,	Luzerne,	These two men were severely burned while putting cotton in their lamps at box; threw a lighted cotton into keg of powder.
10	John Vilans,	Polish,	Laborer,	22	M.	Pettolungo shaft,	Luzerne,	Placed by coal falling on it.
11	S. Jensen Pugh,	Welsh,	Runner,	28	M.	Stevens shaft,	Luzerne,	Side bruised between car and door frame.
17	J. A. Hurst,	American,	Shaft sinker,	25	M.	Henry New shaft,	Luzerne,	Slightly bruised by rock flying from bucket after striking the bottom, caused by the hoisting rope breaking.
18	Michael Scudla,	American,	Doorboy,	11	M.	Hoyte shaft,	Luzerne,	Body severely bruised; struck by plane rope.
18	Walter Wisniewski,	Polish,	Laborer,	21	M.	Pine Ridge shaft,	Luzerne,	Leg bruised; struck by runaway car.
19	John Gallagher,	American,	Pine boss,	29	M.	East Boston shaft,	Luzerne,	Slightly burned on face by an explosion of gas in old workings.
23	Chris. M. Stow,	American,	Surveyor,	37	M.	East Boston shaft,	Luzerne,	This miner and his two laborers were severely burned by igniting a feeder of gas while working in a cross-cut.
24	Frank Baumgardner,	American,	Miner,	33	M.	No. 1 shaft,	Luzerne,	Back bruised; fell in front of trip of cars while unhitching.
24	John P. Pienozzi,	Italian,	Laborer,	33	M.	No. 1 shaft,	Luzerne,	Arm cut by car jumping track against while unhitching.
25	Tommy Brennan,	Irish,	Inside headman,	21	M.	Harry E. shaft,	Luzerne,	Severely injured by fall of rock.
26	Benj. Jones,	Welsh,	Doorboy,	13	M.	Clear Spring shaft,	Luzerne,	Slightly bruised by premature blast.
26	John Pannell,	Polish,	Laborer,	23	M.	Avoca shaft,	Luzerne,	Severely injured by premature blast.
27	Joseph Tokas,	Polish,	Miner,	27	M.	Clear Spring shaft,	Luzerne,	Hand crushed while attempting to take coal out of rolls.
28	Joseph Mokosky,	Polish,	Gate tender,	18	M.	Even breaker,	Luzerne,	Severely injured between cars.
28	John Martin,	Czech,	Gate tender,	18	M.	Even breaker,	Luzerne,	Painfully scalded by steam in boiler room by steam pipe bursting.
30	Thos. Watkins,	Welsh,	Pumpman,	47	M.	Clear Spring shaft,	Luzerne,	Foot crushed while lifting piece of rock; it fell on him.
32	Isaac Jones,	Welsh,	Pumpman,	46	M.	Louise, outside,	Luzerne,	Leg broken while unhitching rope from cars.
37	John Karnish,	Polish,	Miner,	20	M.	Langelute shaft,	Luzerne,	Leg broken while unhitching rope from cars.
18	James Mooney,	American,	Headman,	22	M.	Pinewood shaft,	Luzerne,	Leg broken while walking inside slope by cars.
18	James Wallace,	American,	Assistant boss,	14	M.	East Boston shaft,	Luzerne,	

March

21	Thos. W. Thomas.	Welsh.	Shaft footman.	38	M.	Prospect shaft.	Luzerne.	Big toe cut off while standing on cage in it struck the bottom.
21	Michael Repp.	Hungarian.	Miner.	42	M.	Prospect shaft.	Luzerne.	Shoulder fractured by premature blast.
21	Patrick Mahon.	Irish.	Lead engineer.	42	M.	Prospect shaft.	Luzerne.	Fingers crushed while putting car on track.
1	John McHale.	American.	Laborer.	21	M.	Pine Ridge shaft.	Luzerne.	Face and hands burned by gas.
5	Anthony Reed.	American.	Miner.	42	M.	Forty-Fort shaft.	Luzerne.	Injured by fall of rock.
10	Patrick Brady.	Irish.	Rockman.	50	M.	Louise tunnel.	Luzerne.	Injured in Rock Tunnel by fall of rock.
10	Stanley Shemattles.	Polish.	Laborer.	21	S.	No. 11 shaft.	Luzerne.	Legs bruised by trip of cars.
11	Steve Parsik.	Polish.	Laborer.	38	M.	Hallstead shaft.	Luzerne.	Back bruised by fall of rock.
11	Mike Tamper.	Austrian.	Miner.	28	M.	Chapman shaft.	Luzerne.	Severely injured by rock blast; he was firing; he thought it had missed.
12	Chas. Yutonskey.	Slavonic.	Miner.	22	S.	Mt. Lookout shaft.	Luzerne.	Leg and hand broken by a premature blast he was firing.
19	Jacob Zall.	Slavonic.	Miner.	51	M.	Mt. Vale slope.	Luzerne.	Face and hands burned by gas; after firing struck a feeder.
23	Wm. James.	Irish.	Miner.	55	M.	Clear Spring shaft.	Luzerne.	Luzerne shaft.
24	John Mould.	American.	Laborer.	15	S.	Pettitboro, outside.	Luzerne.	Thigh painfully cut; fell on conveyor chain.
25	Mishack Reese.	Welsh.	Doorboy.	15	S.	Prospect shaft.	Luzerne.	Leg fractured; caught by mule stretcher.
25	Wm. Christian.	Polish.	Miner.	46	M.	Stevens slope.	Luzerne.	Shell fractured by flying coal from a blast.
29	Lawman Oplinger.	American.	Teamster.	33	M.	Mineral Spring, outside.	Luzerne.	Head cut and bruised; fell over rock dump while placing car on track.
29	Wm. Edlin.	Irish.	Miner.	25	S.	No. 10 shaft.	Luzerne.	Injured by fall of roof while drawing out pillars.
3	Daniel Phenney.	American.	Driver.	20	M.	Babylon slope, outside.	Luzerne.	Leg crushed between car bumpers.
3	Mike Zelonski.	Lithuanian.	Miner.	38	M.	East Boston shaft.	Luzerne.	Injured by premature blast he was firing.
3	Thos. J. Fiers.	American.	Lead engineer.	38	M.	Stevens, outside.	Luzerne.	Injured by ash car jumping track on him.
24	Nicholas Tate.	Italian.	Miner.	33	M.	Lykens drift.	Sullivan.	Injured by fall of coal.
24	Wm. McGee.	American.	Miner.	28	S.	Murray shaft.	Sullivan.	Leg broken by fall of rock.
28	Geo. Stankov.	Polish.	Miner.	29	S.	Bernice drift.	Sullivan.	Injured by electric pump of engine.
4	Thos. Tighe.	American.	Lead engineer.	29	S.	Mt. Lookout, outside.	Luzerne.	Arm broken by falling of his engine and falling of rock.
8	Robert Kaminski.	German.	Miner.	22	S.	Lykens drift.	Sullivan.	Leg broken by fall of coal.
6	Joseph Gudzen.	Italian.	Other.	22	M.	Pittston washery.	Luzerne.	Injured; caught in machinery while oiling.
17	Lewis Cowell.	American.	Driver.	24	M.	Bernice drift.	Sullivan.	Leg broken by car jumping track against him.
25	Joseph Shroda.	Hungarian.	Miner.	34	M.	Louise slope.	Luzerne.	Slightly burned by gas in abandoned workings.
30	Andrew Murk.	Polish.	Miner.	38	M.	Exeter No. 1 shaft.	Luzerne.	Back bruised by fall of rock at face of breast.
4	John O. Boyle.	American.	Footman.	19	S.	Larnum No. 2 shaft.	Luzerne.	Leg broken by cars.
4	Frank Washkive.	Polish.	Laborer.	55	M.	Langeliffe shaft.	Luzerne.	Leg and ribs broken by fall of rock.
4	Louis Injatos.	Lithuanian.	Driver.	36	S.	No. 10 shaft.	Luzerne.	Thigh and finger cut; fell off car.
5	Joe Fortuskey.	Polish.	Driver.	17	S.	Pine Ridge shaft.	Luzerne.	Leg broken by car striking head block; rear end struck him.
16	Ercolani Pouchanilda.	Italian.	Miner.	27	M.	Yatesville tunnel.	Luzerne.	Accidentally struck on forehead by hammer by a man with whom he was working. The man was working on a cable descending the shaft on the cage. The engineer lost control of his engines in some manner, and the cage struck the bottom with such force as to cause the above injury; six others escaped with a shaking up.
10	Geo. Matross.	Polish.	Laborer.	31	M.	Hendelberg shaft.	Luzerne.	
10	Wm. Crowley.	American.	Place runner.	31	S.	Hendelberg shaft.	Luzerne.	
10	Andrew Shaves.	Polish.	Miner.	31	M.	Hendelberg shaft.	Luzerne.	

TABLE V—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
13	Wm. Shearer,	American,	Driver,	16	S	No. 10 shaft,	Luzerne.	Skull slightly fractured by a car running out of a breast.
13	Richard Mason,	American,	Miner,	30	M	Avoca shaft,	Luzerne.	Skull fractured by fall of rock.
15	Mike Clune,	American,	Slate picker,	14	S	Pine Ridge breaker,	Luzerne.	Leg broken by falling from railroad cars; left his place of work and climbed up on the car under breaker.
21	Geo. Koipko,	Slavonic,	Miner,	30	M	Mt. Lookout shaft,	Luzerne.	Slightly burned by gas by going into old gangway to look for a chain and block and ignited a small quantity.
21	Mike Gasqua,	Polish,	Miner,	40	M	Mt. Lookout shaft,	Luzerne.	Kicked by his mule.
21	John French,	American,	Driver,	16	S	Katy Did slope,	Luzerne.	Leg broken; struck by piece of coal while riding a car.
21	Geo. Derhammer,	American,	Laborer,	27	S	Harry E shaft,	Luzerne.	Kicked by a car.
22	John Jordan,	American,	Doorbox,	14	S	Laurel Run slope,	Luzerne.	Leg broken by rock sliding against him.
25	Wm. Job,	Polish,	Timberman,	52	M	Pettebone shaft,	Luzerne.	Hip and leg cut by coal flying from a blast.
3	Frank Eainsreem,	Polish,	Miner,	30	S	Mt. Lookout shaft,	Luzerne.	Injured by a fall of rock in the gangway.
6	Anthony Chiniski,	Polish,	Laborer,	30	M	Pettebone shaft,	Luzerne.	Injured by descending cage in shaft while repairing the foot of shaft.
6	Mike Peculas,	American,	Laborer,	27	S	Pettebone shaft,	Luzerne.	Face and hands burned by powder while making a cartridge.
8	John Swartz,	American,	Track layer,	35	S	No. 8 shaft,	Luzerne.	Head cut by coal flying from car which ran away down slope.
10	Anthony Urban,	Russian,	Miner,	27	M	Prospect shaft,	Luzerne.	Back broken by fall of rock.
10	Mike Petros,	Hungarian, ...	Miner,	46	M	Gardner Creek tunnel, ...	Luzerne.	Ribs broken by same fall of rock.
11	Joe Bedness,	Polish,	Miner,	44	M	Bernice drift,	Sullivan.	Leg broken by coal falling in them.
11	Yonny Chernoch,	Polish,	Miner,	25	M	Bernice shaft,	Sullivan.	Cut and bruised by mule kicking him.
11	Joe Chasnoch,	Polish,	Miner,	42	M	Pine Ridge shaft,	Luzerne.	Arm broken by coal from a blast.
12	George Braznoch,	Slavonic,	Miner,	28	M	Twin No. 7 shaft,	Luzerne.	Severely burned by dynamite; while thawing it over flame of their lamp it exploded.
13	Mike O'Rourke,	Irish,	Driver,	20	S	Ridgewood slope,	Luzerne.	Foot crushed; while hoisting trip on slope tried to kick the rope on pulley.
13	Pomgrass Vincenco,	Italian,	Laborer,	45	S	Babylon shaft,	Luzerne.	
15	Carlo Verango,	Italian,	Miner,	35	M	Babylon shaft,	Luzerne.	
15	Bladqui Virgelo,	Italian,	Miner,	30	M	Babylon shaft,	Luzerne.	
15	Morgan Watkins,	American,	Footman,	22	S	Laurel Run slope,	Luzerne.	

16	Mike Adams,	Slavonic,	Miner,	33	M	Midvale slope,	Luzerne,	[Adams and Yanko were burned by an explosion of gas in gangway face; they were working with safety lamps, but opened their lamp and ignited the gas; Grinder's leg was broken by the concussion. Slightly burned by gas. Leg broken and hip dislocated by fall of rock. Bruised by fall of rock. Face and hands cut by premature blast. Leg and ribs broken by fall of rock at face of breast. Leg broken by mule falling on him. Painfully burned by steam pipes, by falling into the economizer.
16	John Yanko,	Slavonic,	Laborer,	24	M	Midvale slope,	Luzerne,	
16	Martin Grinder,	Slavonic,	Runner,	25	M	Midvale slope,	Luzerne,	
16	Stanley Keshofsky,	Polish,	Laborer,	40	S	Harry E. shaft,	Luzerne,	
18	Anthony Jacofski,	Polish,	Laborer,	43	M	Twin No. 1 shaft,	Luzerne,	
23	Stanley Yescovage,	Polish,	Miner,	28	M	Midvale slope,	Luzerne,	
23	Wm. Smolinski,	Polish,	Miner,	44	M	Twin No. 2 shaft,	Luzerne,	
24	Joe Auchak,	Polish,	Miner,	38	S	Bernice drift,	Sullivan,	
24	John Duffey,	Irish,	Driver,	16	S	Henry shaft,	Luzerne,	
27	Florence Carruth,	American,	Engineer,	19	S	Henry, outside,	Luzerne,	



Fourth Anthracite District.

LUZERNE COUNTY.

Kingston, Pa., March 4, 1903.

Hon. James W. Latta, Secretary of Internal Affairs, Harrisburg
Pa.

Sir: I have the honor to submit my annual report as Inspector of Mines for the Fourth Anthracite District for the year ending December 31, 1902.

Owing to a variety of causes, chief among which were strikes and floods, there was a reduction of 3,791,912 tons from the output of 1901, although the daily average increased 4,171 tons.

This report contains the table as required by the Bureau of Mines, a brief description of all the fatal accidents and also a list of the improvements made at the various collieries during the year.

Very respectfully,

EDWARD E. REYNOLDS,

Inspector of Mines.

SUMMARY OF STATISTICS FOR 1902.

Number of mines in district,	74
Number of mines in operation during 1902,	72
Number of tons of coal produced,	6,099,420
Number of tons shipped to market,	5,241,041
Number of tons sold at mines to local trade,	234,355
Number of tons consumed at mines in generating steam and heat.	624,024
Number of persons employed inside the mines,	17,408
Number of persons employed outside,	7,356
Number of fatal accidents inside the mines,	41
Number of tons produced for each fatal accident in- side,	148,766
Number of persons employed per fatal accident in- side,	422

Number of fatal accidents outside,	11
Number of persons employed per fatal accident outside,	669
Number of wives made widows by fatal accidents, ..	21
Number of children orphaned by fatal accidents, ...	67
Number of non-fatal accidents inside of mines,	104
Number of persons employed per non-fatal accident inside,	166
Number of non-fatal accidents outside,	30
Number of persons employed per non-fatal accident outside,	245
Number of steam locomotives used inside,	3
Number of compressed air locomotives used inside, .	4
Number of electric motors used inside,	9
Number of fans used for ventilation,	92
Number of gaseous mines in operation during 1902, .	65
Number of non-gaseous mines in operation during 1902,	7
Number of new mines opened in 1902,	2

A. Production of Coal During the Year 1902.

Names of Companies.	Tons.
Lehigh and Wilkes-Barre Coal Company,	1,745,208
Delaware and Hudson Coal Company,	980,769
Susquehanna Coal Company,	740,482
Delaware, Lackawanna and Western Railroad Company,	517,686
Kingston Coal Company,	634,336
Lehigh Valley Coal Company,	320,519
Parrish Coal Company,	369,538
Red Ash Coal Company,	125,115
Alden Coal Company,	148,947
West End Coal Company,	147,225
Warrior Run Coal Company,	118,890
Pittston Coal Company,	18,880
Plymouth Coal Company,	106,081
George F. Lee Coal Co.,	35,744
Sterling Washery,	35,426
North American Washery,	54,574
Total,	6,099,420

B. Showing the number of fatal and non-fatal accidents inside and outside the mines; number of tons of coal produced per fatal and non-fatal accident inside the mines; number of persons employed inside and outside; and the number employed inside and outside for every fatal and non-fatal accident for each company during 1902.

Names of Companies.	Number of lives lost in- side.		Number of lives lost out- side.		Total number of lives lost.	Number severely injured inside.		Number severely injured outside.		Total number severely injured.	Tons of coal produced per each life lost in- side.		Tons of coal produced per serious injury in- side.		Number employees inside of mines.	Number employees outside of mines.	Total number employed.	Number of employees in- side for each life lost.		Number of employees out- side for each severe in- jury.	
	12	2	14	39		6	45	145,436	44,749		4,616	1,680	6,296	385				118	840	286	
Lehigh and Wilkes-Barre Coal Co.,	6	1	7	8	15	4	12	163,461	122,596	2,611	1,141	3,752	433	326	1,141	285					
Delaware and Hudson Canal Co.,	2	1	3	22	25	6	28	148,086	33,658	2,749	1,191	3,940	550	125	397	198					
Susquehanna Coal Co.,	2	1	3	5	8	13	8	238,859	95,541	2,066	728	2,461	1,069	403	728	91					
Kingston Coal Co.,	9	9	18	4	22	1	9	70,482	79,212	1,471	813	2,284	167	176	813	813					
Lehigh Valley Coal Co.,	2	1	3	4	7	1	4	160,259	80,130	1,123	326	1,457	115	113	326	326					
Parrish Coal Co.,	1	1	2	3	5	1	4	366,537	45,817	1,123	309	1,432	124	141	369	309					
Red Ash Coal Co.,	1	1	2	3	5	1	4	74,473	40,884	326	208	534	179	169	208	208					
Alden Coal Co.,	2	1	3	3	6	1	3	49,649	40,884	407	132	539	204	136	461	136					
West Erie Coal Co.,	1	1	2	3	5	1	3	461	294	461	251	712	111	111	251	126					
Warrior Run Coal Mining Co.,	1	1	2	1	3	1	1	18,880	18,880	294	141	435	111	111	251	141					
Pittston Coal Co.,	1	1	2	1	3	1	1	106,081	106,081	270	125	395	270	125	395	125					
Plymouth Coal Co.,	1	1	2	1	3	1	1	108	69	108	69	177	108	69	177	108					
George F. Lee Coal Co.,	1	1	2	1	3	1	1	22	22	22	22	22	22	22	22	22					
Sterling washery,	1	1	2	1	3	1	1	51	51	51	51	51	51	51	51	51					
North American Coal Co.,	1	1	2	1	3	1	1	17,408	17,408	17,408	7,356	24,764	424	166	609	245					
Totals and averages,	41	11	52	104	156	134	148,766	58,648	17,408	7,356	24,764	424	166	609	245	245					

C. Classification of Fatal Accidents for the Year 1902.

	Inside of Mines.										Outside of Mines.						Grand total.		
	By Fall of		Roof.	By mine cars.	By explosion of gas.	Smothered by gas.	Powder and dynamite.	By blasts, etc.	By Falling into			Total inside.	By cars.	By machinery.	By suffocation.	By boiler explosions.		Miscellaneous causes.	Total outside.
	Coal.	State.							Shafts.	Slopes.	Manways, breasts, etc.									Crushed at batteries.	By mules.	Suffocated by coal, etc.	Miscellaneous causes.
January.	1	1	1	1	1														4
February.	2	1	1	2	1														6
March.		1																	1
April.	2		1	1					1										5
May.				1															1
June.																			0
July.																			0
August.				1	1														2
September.			1																1
October.	1	1	1	4															6
November.	1																		1
December.																			0
Totals.	8	1	7	11	1	1	2	4	1	1							2	41	52

E. Occupations of Employes Killed or Fatally Injured Inside and Outside the Mines of the Fourth Anthracite District During 1902.

Months.	Inside.										Outside.											
	Mine foremen.	Assistant mine foremen.	Fire bosses and assistants.	Miners.	Miners' laborers.	Drivers and runners.	Door-boys and helpers.	Pumpmen.	Company men.	All other employes.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers (boys).	State pickers (men).	Book-keepers and clerks.	All other employes.	Total outside.	Grand total.	
January,	4	3	1	1	.....	1	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	1	1	6
February,	1	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
March,	4	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
April,
May,
June,
July,
August,
September,
October,	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
November,	4	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
December,
Totals,	1	17	11	4	1	.....	4	3	41	.....	.....	.....	.....	.....	.....	.....	6	11	.....	52

F. Occupations of Employees Severely Injured Inside and Outside the Mines of the Fourth Anthracite District During 1902.

Months.	Inside.										Outside.											
	Mine foremen.	Assistant mine foremen.	Fire bosses and assistants.	Miners.	Miners' laborers.	Drivers and runners.	Door-boys and helpers.	Pumpmen.	Company men.	All other employees.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen	State pickers (boys).	State pickers (men).	Book-keepers and clerks.	All other employees.	Total outside.	Grand total.	
January,	1	.....	.....	9	4	3	.....	.....	1	.....	18	.....	.....	1	1	.....	.....	.....	.....	.....	4	22
February, .....	.....	.....	.....	4	3	.....	.....	.....	1	.....	11	.....	.....	.....	1	1	.....	.....	.....	.....	4	15
March, .....	.....	.....	1	6	4	1	.....	.....	1	.....	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	15
April, .....	.....	.....	.....	2	4	1	.....	.....	2	.....	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	19
May, .....	.....	.....	.....	1	2	3	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	19
June, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1
July, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1
August, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1
September,	1	.....	.....	.....	1	4	.....	.....	.....	.....	17	.....	.....	.....	1	.....	.....	.....	.....	.....	1	1
October, .....	.....	.....	1	8	2	7	.....	.....	.....	.....	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	23
November, .....	.....	.....	.....	2	5	4	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	26
December, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	20
Totals,	2	.....	2	39	21	23	7	2	7	1	104	.....	.....	1	2	7	.....	.....	20	60	134	

G. Nationality of Employees Killed or Fatally Injured Inside and Outside the Mines During 1902.

	American.	English.	Welsh.	Scotch.	Irish.	German.	Polish.	Hungarian.	Italian.	Slavonic.	Lithuanian.	Greek.
January,	1		1				2		1	1	1	1
February,	1	1			1		4			1	1	
March,	1	1	1			1						
April,	1						4				1	
May,	1		1									
August,						1						
October,			1				1					
November,					1		1	1		1		
December,	1	1	4	1	2		3		1		2	
Totals,	6	3	8	1	5	2	15	1	2	3	5	1

H. Nationality of Employees Severely Injured Inside and Outside the Mines During 1902.

	American.	English.	Welsh.	Irish.	German.	Polish.	Hungarian.	Italian.	Slavonic.	Lithuanian.	Austrian.	Russian.
January,	5	3	2			2		1	1	2		
February,	2	1	2			2				1	1	
March,	2	1	2			2	2					3
April,	1								1	4	1	
May,	1								1			
August,												
September,	1		1									
October,	10		1			1						
November,	12		2	2		4	1		3	12		
December,					1	7						1
Totals,	43	8	15	11	1	29	4	1	6	9	2	4

I. Giving names of operators and mines, kind of openings, type and size of fans; size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each employe per minute in the mines of Fourth Anthracite District for the year 1902.

Names of Operators and Mines.	Kind of opening.	Gaseous or non-gaseous.	Method of ventilation.	Diameter and width of fan in feet.	Water gauge developed—in inches.	Name of fan.	Power used.	Number of air splits of air currents.	Number of cubic feet of air per minute entering the mine at inlet.	Total quantity of air per minute circulating in all the splits in cubic feet.	Number of cubic feet per minute passing out at outlet.	Number of persons employed inside.	Average number of cubic feet per minute provided for each person.
Lehigh and Wilkes-Barre.													
Hollenback.	Shaft.	Gaseous.	Fan.	35 x 11-6	1.25	Gubal.	Steam.	10	25,800	210,400	302,500	388	740
Hollenback.	Shaft.	Gaseous.	Fan.	35 x 11-9	1.25	Gubal.	Steam.						
Hollenback.	Shaft.	Gaseous.	Fan.	35 x 11-9	.80	Gubal.	Steam.						
South Wilkes-Barre.	Shaft.	Gaseous.	Fan.	24 x 8	1.25	Gubal.	Steam.						
South Wilkes-Barre.	Shaft.	Gaseous.	Fan.	35 x 11-6	1.25	Gubal.	Steam.	15	419,000	222,000	440,000	757	550
South Wilkes-Barre.	Shaft.	Gaseous.	Fan.	35 x 11-6	1.25	Gubal.	Steam.						
Stanton.	Shaft.	Gaseous.	Fan.	35 x 11-9	1.3	Gubal.	Steam.	9	257,200	210,100	220,000	655	370
Stanton.	Shaft.	Gaseous.	Fan.	35 x 11-7	1.9	Gubal.	Steam.						
Sugar Notch.	Shaft.	Gaseous.	Fan.	29 x 6-8	1.2	Gubal.	Steam.						
Sugar Notch.	Shaft.	Gaseous.	Fan.	34 1/2 x 10-11	1.2	Gubal.	Steam.	9	250,000	233,500	270,000	428	580
Laroe.	Shaft.	Gaseous.	Fan.	35 x 11-9	2.	Gubal.	Steam.						
Laroe.	Shaft.	Gaseous.	Fan.	35 x 11-9	2.	Gubal.	Steam.	10	479,400	335,800	480,900	486	900
Laroe.	Shaft.	Gaseous.	Fan.	24 x 7-10	1.55	Gubal.	Steam.						
Nottingham.	Shaft.	Gaseous.	Fan.	24 x 8	1.75	Gubal.	Steam.						
Nottingham.	Shaft.	Gaseous.	Fan.	24 x 8	1.75	Gubal.	Steam.	10	434,000	313,000	449,000	700	620
Nottingham.	Shaft.	Gaseous.	Fan.	24 x 8	1.75	Gubal.	Steam.						
Nottingham.	Shaft.	Gaseous.	Fan.	24 x 8	1.12	Gubal.	Steam.						
Nottingham.	Shaft.	Gaseous.	Fan.	24 x 8	2.	Gubal.	Steam.						
Wanamie.	Shaft.	Gaseous.	Fan.	24 x 8	1.9	Gubal.	Steam.	5	98,700	58,500	97,500	272	330
Wanamie.	Shaft.	Gaseous.	Fan.	15 x 3	4	Gubal.	Steam.						
Wanamie.	Shaft.	Gaseous.	Fan.	15 x 3	4	Gubal.	Steam.						
Maxwell.	Shaft.	Gaseous.	Fan.	24 x 8	1.5	Gubal.	Steam.	7	100,000	87,500	105,000	249	220
Maxwell.	Shaft.	Gaseous.	Fan.	25 x 2-2	1.5	Gubal.	Steam.	5	55,000	45,000	60,000	166	500
Maxwell.	Shaft.	Gaseous.	Fan.	35 x 11-9	1.5	Gubal.	Steam.						
Maxwell.	Shaft.	Gaseous.	Fan.	35 x 11-9	1.5	Gubal.	Steam.	10	328,000	286,000	342,000	535	610

TABLE I—Continued.

Names of Operators and Mines.	Kind of opening.	Gaseous or non-gaseous.	Method of ventilation.	Diameter and width of fan in feet.	Water gauge developed—in inches.	Name of fan.	Power used.	Number of air splits of air currents.	Number of cubic feet of air per minute entering the mine at inlet.	Total quantity of air per minute circulating in all the splits in cubic feet.	Number of cubic feet per minute passing out at out- let.	Number of persons employed inside.	Average number of cubic feet per minute provided for each person.
Delaware and Hudson Canal Co.													
Boston, No. 1.	Shaft.	Gaseous.	Fan.	22 x 5	2.6	Guibal.	Steam.	6	126,600	122,900	139,400	215	400
Plymouth No. 1.	Shaft.	Gaseous.	Fan.	25 x 10	2.7	Guibal.	Steam.	8	207,700	202,300	218,700	417	500
Plymouth No. 2.	Shaft.	Gaseous.	Fan.	22 x 5	2.9	Guibal.	Steam.	8	251,000	213,100	270,100	435	570
Plymouth No. 3.	Shaft.	Gaseous.	Fan.	17 x 4	1.4	Guibal.	Steam.	4	104,400	97,000	134,900	316	335
Plymouth No. 4.	Shaft.	Gaseous.	Fan.	23 x 10	2.3	Guibal.	Steam.	4	179,000	161,000	188,000	293	610
Plymouth No. 5.	Shaft.	Gaseous.	Fan.	22½ x 5	2.9	Guibal.	Steam.	4	131,100	124,400	139,500	159	820
Canyingham.	Shaft.	Gaseous.	Fan.	20 x 8	1.8	Guibal.	Steam.	3	90,600	84,500	93,500	136	600
Baltimore No. 1.	Shaft.	Gaseous.	Fan.	17 x 8	1.6	Guibal.	Steam.	3	106,700	95,900	113,300	141	720
Baltimore No. 2.	Shaft.	Gaseous.	Fan.	17½ x 4	4.5	Guibal.	Steam.	5	168,700	75,500	182,000	219	770
Baltimore slope.	Shaft.	Gaseous.	Fan.	18 x 4	2.25	Guibal.	Steam.	5	37,200	63,000	107,500	180	540
Baltimore tunnel.	Tunnel.	Non-gas.	Fan.	19 x 8	1.50	Guibal.	Steam.	5	37,200	63,000	107,500	180	540
Susquehanna Coal Co.													
No. 1 North shaft.	Shaft.	Gaseous.	Fan.	25 x 8	1.5	Guibal.	Steam.	10	154,900	122,100	189,900	463	330
No. 1 North shaft.	Shaft.	Gaseous.	Fan.	20 x 6	1.5	Guibal.	Steam.	9	190,100	152,600	204,000	522	360
No. 1 South shaft.	Shaft.	Gaseous.	Fan.	25 x 8	1.5	Guibal.	Steam.	9	190,100	152,600	204,000	522	360
No. 2 shaft.	Shaft.	Gaseous.	Fan.	25 x 8	1.6	Guibal.	Steam.	5	116,000	85,500	122,500	303	380
No. 2 shaft.	Shaft.	Gaseous.	Fan.	25 x 8	1.5	Guibal.	Steam.	5	116,000	85,500	122,500	303	380
No. 4 shaft.	Shaft.	Gaseous.	Fan.	20 x 6	3.0	Guibal.	Steam.	3	40,000	39,000	51,000	133	310
No. 5 shaft.	Shaft.	Gaseous.	Fan.	20 x 6	1.3	Guibal.	Steam.	4	78,000	62,000	86,000	58	1,340
No. 6 shaft.	Shaft.	Gaseous.	Fan.	8 x 2	4	Sturdevant.	Steam.	4	78,000	62,000	86,000	58	1,340
No. 6 shaft.	Shaft.	Gaseous.	Fan.	20 x 6	1.2	Guibal.	Steam.	4	14,000	.....	16,000	*	*
No. 6 shaft.	Shaft.	Gaseous.	Fan.	25 x 8	1.5	Guibal.	Steam.	4	14,000	.....	16,000	*	*
No. 4 slope.	Slope.	Gaseous.	Fan.	25 x 8	1.5	Guibal.	Steam.	4	100,700	48,600	116,400	321	210
No. 6 slope.	Slope.	Gaseous.	Fan.	16 x 4	.90	Guibal.	Steam.	4	100,700	48,600	116,400	321	210
No. 6 slope.	Slope.	Gaseous.	Fan.	20 x 6	2.00	Guibal.	Steam.	4	100,700	48,600	116,400	321	210
No. 6 slope.	Slope.	Gaseous.	Fan.	20 x 6	1.20	Guibal.	Steam.	4	100,700	48,600	116,400	321	210
No. 6 slope.	Slope.	Gaseous.	Fan.	25 x 8	1.50	Guibal.	Steam.	6	112,000	99,000	114,000	349	320
No. 6 slope.	Slope.	Gaseous.	Fan.	25 x 8	1.50	Guibal.	Steam.	6	112,000	99,000	114,000	349	320
No. 6 tunnel.	Tunnel.	Gaseous.	Fan.	20 x 6	.90	Guibal.	Steam.	6	112,000	99,000	114,000	349	320

Farrish Coal Co.										Del., Lack'a and West. R. R. Co.										Lehigh Valley Coal Co.										Plymouth Coal Co.										Warrior Run Coal Co.										Kingston Coal Co.										Red Ash Coal Co.										Alden Coal Co.										West End Coal Co.										Geo. F. Lee Coal Co.									
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Parrish,										Del., Lack'a and West. R. R. Co																																																																																									

*Idle.

Comments on Causes of Accidents, Etc.

There were 52 fatal and 134 non-fatal accidents reported in this district during the year 1902.

By referring to Table C it can be seen that 41, or 78.8 per cent. of the fatal accidents occurred inside the mines, and 11, or 21.2 per cent. on the outside. A total of 18, or 34.6 per cent. were caused by mine cars alone. Investigation of these accidents showed clearly that 13 of them could have been avoided by very little care on the part of the victims, and a more strict discipline on the part of the officials.

There is a great deal too much sentiment permitted to enter into the enforcement of rules. Foremen who are lax in carrying out the orders of their superiors do so with a mistaken idea that they are favoring the men; they do not imagine that this policy always has a tendency to make the workmen less careful for their own safety, and that of others. I do not charge any foreman in the district with a violation of the Mine Law as it stands on the statute books, but I desire most emphatically to state that if they would observe the law, and inject into their daily duties a more decided method of carrying out their orders, and accept no excuses for delay or disobedience, there would without doubt be a great reduction in the number of fatal accidents from this cause.

To falls of roof and coal are charged 16 fatal and 44 non-fatal accidents, or 41.4 per cent. of all the accidents that occurred inside the mines during the year.

The article from the Bureau of Mines upon the subject of systematic timbering, published in the Annual Report of 1901, cannot be too highly commended, and should receive the hearty support of every person who is interested in removing the occupation of a coal miner from the extra hazardous class. To accomplish this object, and insure a proper and careful method of securing the roof, the work should be done by persons employed for this particular work.

Propping, as it is done at present, necessitates a great loss of valuable timber, as a large number of the miners neither know where or how to stand props. It would not require a large increase in the working force of a colliery to have practical and experienced men to do the propping and timbering in the chambers and gangways, and the material they would save would more than pay their wages. This would not conflict with rules 12 and 14, article 12, of the Mine Law, as it is in all cases the duty of the mine foreman to direct the proper persons to secure the roof and sides, and he would not be dependent upon obedience to his orders on men who do not understand what he directs them to do, and the miners would then have more time to devote to winning and pre-

paring coal. Had these suggestions been carried out during the year 1902, six of the fatalities, or $37\frac{1}{2}$ per cent. of the number due to this cause would not have occurred.

Four were killed by premature blasts, due to shortening squibs or to some mistake in handling them. The only method to do away with this class of accidents is to remove the cause, for, if men are permitted to use squibs, the temptation is constantly presented to shorten or tamper with them. If the miners were compelled to fire all blasts by the use of a battery, there would be no missed or hung shots. The difficulty in the past has been to ignite black powder by a battery without the use of an exploding cap, but this trouble has been removed, as the Electric Fuse Company has introduced an electric fuse which is the first known that will ignite black powder without a cap, as the fuse itself is separate from the cap, and only in case of blasting with dynamite the loose cap has to be pushed into the paper tube of the powder fuse. The use of such electric fuses without the cap attached is much safer in all gaseous mines, where squibs are now used, because no open flame like the burning of the paper of the squib can touch the gas. Further, the electric powder fuse has the great advantage that all men can reach a safe place before the battery is touched by the miner who has control of the key for operating it. The fuses are cheaper than any of those to which caps are attached, and have given satisfaction wherever they have been used.

A Brief Description of the Fatal Accidents.

Edward McGrath, a fuelman at the Maxwell breaker, whose duty it was to load fuel into cars for No. 1 slope, called the locomotive engineer to get cars from the washery and as the engineer was going up to the Red Ash shaft, McGrath jumped on the engine. Above the breaker stood a derrick, and just as the locomotive was passing it, he put his head out of the cab window and was caught by one of the posts, injuring him so that he died shortly afterwards.

George Yakabois, an outside laborer at Breaker No. 7, of the Susquehanna Coal Company, was cleaning the track on the head of the dirt plane, and was caught by a car coming over the knuckle, as he was facing the opposite direction, and so badly injured that he died in two days.

Mike Screen was instantly killed by a fall of coal at the face of his chamber. This accident was unavoidable.

William J. George was mining in the Conyngham colliery and had no laborer; about 1 P. M. he fired a blast; the men on the gangway not hearing any signal given, went up in the chamber to see where

he was and found his body. An investigation failed to reveal the cause of this accident, as the premature blast might have happened from either of several causes.

Adam Newallis was employed to push cars at the foot of No. 4 Shaft. The runner, instead of throwing the switch before running his trip, came down with three cars from the head of the slope, ran in on the empty track, bumped the motor that was coupled to the empty cars and knocked the hind one off the road, catching Newallis and pinning him against the rib. Newallis had plenty of time to get out of the way, but did not avail himself of it.

At the Avondale, Thomas Farasacy was instantly killed on January 24 by a fall of roof. The chamber was double timbered throughout, but a "bell" fell out and caught him. These "bells" are very treacherous, as it is impossible to see them before they fall.

Uiko Tokar, at Alden, was instantly killed by a fall of roof. He was notified by the fire boss in the morning to stand props before he did any other work, as he had detected a slip in the roof when he went through in the morning. Tokar promised to stand the props, but when the mine foreman went through his place at about 9 A. M., he found him mining out some loose coal. He was again ordered to stand props, and commenced to do so, but when the foreman left his chamber, he began to load a car and was caught by the fall of roof.

Joseph Marshall was robbing pillars in Alden No. 1, and was instantly killed by a fall of clod in the face of the pillar. The slip that broke off was hidden in the rib so that it could not be detected.

John Rasamovitch was killed by a blast through a cross heading. The miner in the next chamber, when he had prepared a blast, notified Rasamovitch that he was going to fire, but he would not do so, as he did not think the hole would break through; consequently, when the blast exploded, it threw the coal over into Rasamovitch's chamber and killed him instantly.

John Wascavicz was killed by a car on the dirt bank of Breaker No. 5, Susquehanna Coal Company. He and three other men were employed in dumping dirt on the bank. They had unloaded a car and pushed it back on the empty branch, putting a block behind the wheel, instead of dropping the brake to hold the car. It was Wascavicz's duty to put on the brake, but he neglected it. When they took the next loaded car down the dump, the victim was standing at the hind end of it; the empty car on the branch was started by the wind blowing against it, and ran down the track, catching Wascavicz and pinning him to the other car.

Joseph Merlings was loading a car at the face, when a piece of rock fell and caught him. He died February 8 as a result of the

injury. Upon investigation I found that the slip in the rock ran to a feather edge at the pillar, and could not be detected.

Thomas Timlin was fatally injured on February 15 and died on March 12 in the Mercy Hospital. He had fired a hole in the top coal, but as the coal did not come down he commenced to drill another hole, and before he finished, the coal came down on him.

Edward Broom was making his usual Sunday morning examination of the old workings of Plymouth No. 2, along the slush pipe line, and it is supposed that he encountered a body of gas as he was going through a cross cut between two chambers. His body was not found until 9.30 P. M. on Monday, although the mine was thrown idle and a large number of men were formed into searching parties. Upon investigation, I found that he left the barn boss at 7 A. M., at No. 2 Shaft, and told him he was going up No. 1 Shaft. The fans were not stopped during the day, and there had never been any gas found there before. His safety lamp was smashed into pieces.

Jacob Babetski, a laborer in No. 6 Slope, Susquehanna Coal Company. His miner was turning of a chamber in the Top Ross seam, had drilled a hole and gone back to the box to prepare a cartridge of powder. The roof being bad, he told Babetski to keep back from the face, but instead of doing so he started turning the machine in the hole and the roof fell on him, carrying with it two sets of cross timbers and burying him under the fall.

Peter Szieffer was shoveling coal from the face, when the roof fell and killed him. The roof was bad about fifty feet from the face of the gangway, and the fire boss had stopped the place until he had it cross-timbered. Szieffer was ordered to go home in the morning, but instead of doing so, he went into the face and was killed.

Paul Dickey, a driver at Kingston No. 1 Shaft, was going home at noon to attend a funeral. When he came to the foot of the slope he jumped on the head end of a trip to ride up. As the trip was pulling out of the lift he was knocked off and fell under the wheels.

Thomas Gibbon, a door boy at the Stanton, was riding out on a trip of loaded cars. Two cars uncoupled on No. 8 plane and ran away, out the gangway, caught the other trip and injured Gibbon so that he died two days afterwards.

George B. Rice was at the foot of the West End dirt plane, and two empty cars were coming down the plane; when they reached the foot of the plane they caught Rice, knocked him from the trestle, across the tracks to the wagon road, killing him instantly.

David Hawkins was playing at the foot of the tower plane, jumping on cars that the timbermen were using. He was warned sev-

eral times to stop and go away, but he continued playing until he was run over by a car loaded with timber and killed.

Joseph Blockus, a slate picker, had exchanged places with the boy attending the conveyor line, unknown to the foreman. Instead of knocking pieces off of the line with a stick, as the other boy did, Blockus jumped up on the chute and attempted to do it with his foot, but was caught by the conveyor and dragged around the sprocket wheel.

Richard Hughes had fired a shot in the mining bench in the face of his chamber in Shaft No. 3, Kingston, and was preparing another hole, when the middle rock fell on him. There was a slip in the rock that could not be seen previous to the accident.

Simon Thomas, a miner in No. 2 plane, Hollenbeck colliery, was called by the fire boss to assist in extinguishing a fire in the next chamber to the one in which he was working. The heat from the fire caused a piece of coal to fall from the pillar on Thomas, which injured him so that he died in about a half hour.

Charles Suchotski, a miner at the Maxwell, was working a chute chamber in the Ross seam. Immediately after firing a blast he returned to the face, and a large piece of top coal fell on him. He returned too soon to the face.

Joseph Vizgar, a miner at Slope No. 6, Susquehanna Coal Company, was going home with his laborer. The laborer wanted him to go out through No. 6 Shaft or by way of the manway, as was the custom with all the men after work, but Vizgar determined to walk up the slope. The slope pitches about forty degrees. When he was 200 feet up he slipped and fell to the bottom, and was killed.

Adam Morkofski, miner in the George seam of Slope No. 4, Susquehanna Coal Company, after firing a blast, was working out the loose coal, when a piece of top rock fell on him. The blast had knocked out some props and he did not replace them.

John Rygualski, laborer at No. 2 Shaft, Susquehanna Coal Company, was instantly killed at the foot of No. 5 Slope. He was employed as a road cleaner and as the slope runner was about to drop a trip of empty cars into the lift, he told Rygualski to get out of the way; he repeated the order in Polish and was answered "all right." The footman then coupled the cars, and Rygualski stepped in between the first and second cars. As the empty trip was coming down the track, it jumped the road and knocked the first loaded car off, catching Rygualski.

Harry Hoxie, a driver at the Buttonwood colliery of the Parrish Coal Company, had pulled a car out of the airway and was riding on the front end of it on the gangway. It is supposed that his foot was sliding on the rail, and he was caught by a joint, which

dragged him under the car. It is a habit that many drivers have, of sitting on the car bumper, with one foot on the stretcher, letting the other slip on the rail. The least inequality in the track will cause him to be thrown off.

Edward Roberts was employed to attend the head of No. 3 Red Ash slope, but came out to the foot of the shaft at noon to look for a trip of cars. As the cars were being switched around the head of No. 2 Slope, he attempted to uncouple some of them, when one car jumped the track and injured him so that he died the next day. He was at least half a mile from the place of his work.

John Mooney, a slate picker at the Chauncey breaker, came out to play with some other boys at the mouth of the tunnel. While they were there, a trip of loaded cars came out of the tunnel, and he attempted to step on the front end, but he missed and fell and was instantly killed.

John Schmitt had the contract for concreting the airshaft at the Parrish colliery from top to bottom. On August 30, as he was about to descend the shaft he signalled the engineer to lower the bucket, but through some misunderstanding he was hoisted to the top and crushed between the bucket and roof of the air shaft, receiving injuries that proved fatal.

John Pollic, laborer at Shaft No. 2, Nanticoke, attempted to step on a loaded trip as it was coming up No. 5 Slope, but he missed and fell under; he died in the hospital.

Arthur Evans was so severely scalded at the Dorrance colliery on October 30 that he died from his injuries. He was going to work at 5.30 P. M., and when he went down the shaft he got off the cage at the wrong end. Instead of walking around the foot of the shaft, he stepped into the carriage seat and over into a small sump containing thirteen inches of water. The water was hot, as steam was run through it to keep the foot of the shaft from freezing.

Andrew Mathews, at Sugar Notch No. 9, had fired a blast in the top coal, but as he could not get the coal down by barring, after the blast he loaded a car, when the coal fell and killed him.

James Boyle was loading a car in the Baltimore seam, Conyngham colliery, on the night shift. His miner had blasted down the rock, but a small piece fell from the rib and struck Boyle, killing him instantly.

Carl Girchis and his helper rode on the mine locomotive from Baltimore Shaft No. 2 to Breaker No. 5 for the purpose of repairing a piece of broken road. As the engine was stopping, Girchis stepped off the front end and in some manner stumbled and fell; his head was caught under the bumper. His injuries appear to be

very slight, as he walked to the engine house, but he died in twenty minutes.

On November 24, John Swartz, while ascending Shaft No. 3, South Wilkes-Barre, fell in the cage; was caught between the buntion and the cage and was instantly killed. His laborer cut his hand slightly, and Swartz was taking him home, and when they came to the foot of the shaft, the miner, laborer and a bratticeman stepped on the cage. They had the laborer in the middle, Swartz holding on to one hand rail, and the bratticeman the other. The cage was raised very slowly, but when it was within one hundred feet of the surface, Swartz let go of the laborer and the hand rail and fell forward.

Frank Mulligan was laboring in the slope of Baltimore Shaft No. 2. In hoisting a trip, a car got off the track. The car was down so that the axles were on the rails, and they could not get it up with a lever. The runner then signaled the engineer to pull the trip up the slope, to give them a better chance at it. At the first pull, the car that was off the road swung around in such a manner that its side struck a prop and knocked it out, permitting some loose top coal to fall, which caught Mulligan and killed him.

David S. Davis and three other men were working at repairs in the Stanton shaft. The cage had been taken off and replaced by a bucket, used in hoisting water. On top of the bucket was a strong, substantial platform. The men worked upon this platform. After completing their work, they ascended to the top, but the engineer pulled the bucket up about two and one-half or three feet above the landing. Davis jumped from the platform and fell backwards into the shaft.

John Kani was opening a chamber on the Cooper plane in Wanamie No. 18. When putting off a blast, he ran out the gangway in the direction the coal would go. It caught him, and injured him so that he died six days after.

On December 9 an explosion of dynamite occurred at the South Wilkes-Barre colliery, Lehigh and Wilkes-Barre Coal Company, that caused the death of five men and the serious personal injury of three others. The company has a rule prohibiting men from taking any high explosive down the shaft with them, as an empty cage is provided for that purpose. On the above date, Mathew Phillips, a miner employed in driving a gangway in the Baltimore seam, procured a box of dynamite at the supply house, brought it to the head of the shaft, descended and reported to the fire boss. He and his laborer returned to the foot of the shaft and waited for the dynamite. There were four cases sent down on the cage, three for a contractor, who is driving a tunnel, and one for Phillips. Phillips and his laborer, James McGlynn, took their box from the

cage, Phillips carrying it; went around the shaft to the empty track side, walked up on the east side empty car road, when the dynamite exploded, instantly killing Mathew Phillips, James McGlynn and Arthur Jones, and injuring Robert Humbleby so that he died in the ambulance as he was being taken to the hospital, and Charles Stafford, who died the following morning. George Knauer, Evan L. Jones and Neil Sweeney were severely injured and several others were more or less severely bruised. In my investigation, and also at the inquest held by the coroner, it was impossible to obtain any information regarding the cause of the accident, as every person in the immediate vicinity of the explosion was instantly killed. Phillips was a careful, experienced miner, accustomed to handling dynamite and had worked in the same gangway for two years, and was constantly using explosives. The force of the explosion was so great that it displaced the main air bridge that crosses the empty car roadway, and dislodged a number of props that were standing along the road side.

Peter Perhavage was a laborer in the Franklin. On December 9 his miner wanted him to help stand a prop at the face of the chamber, but a car being pulled up to the face, he refused to stand the prop before loading the car. His miner, instead of insisting upon his standing the prop, permitted him to have his way. When the car was about half loaded the roof came down in the middle of the road and instantly killed Perhavage.

Benjamin Davis, miner; Anthony Perok and Thomas Posak, laborers, were instantly killed at Shaft No. 3, Kingston Coal Company, on December 11. They worked on the engine plane in the Orchard seam, Davis in the top lift on the left of the plane, Perok and Posak on the lift below. There is a manway on each side of the plane, and the extension of the plane goes out to the surface. Davis, having finished his day's work, came out to the plane and crossed it, then stood with his back to the pillar. The laborers walked up the manway on their side of the plane and stood with him. The plane runner, who was switching cars from the top lift on one side of the plane to the top lift on the other side, told them to get out of the way, but they refused to do so. The trip was pulled above the latches, and as they began to slack down, the coupling broke between the rock car and the upper car of coal, allowing the nine cars to run away. An empty car jumped the track at the frog, caught the men and pinned them against the pillar.

James Sullivan was killed by falling into the elevator shaft of the Auchincloss breaker on December 12. The breaker had stopped running at 10.30 A. M., but the elevator was going until 3.45 P. M. After the breaker stopped, Sullivan had been put to work cleaning

out one of the screens, and the assistant foreman saw him at his work at 3.30 P. M., but he fell into the elevator shaft, seventy-five feet away from his work.

James Dudson, a laborer in the Conyngham, had been notified on the morning of December 22 not to run any loaded cars out of the counter in which he was working, as there were runners employed for that purpose. After loading their last car, he and his partner ran it out to the gangway; the front end of the car struck the head block, throwing the hind end off the road, catching Dudson's head against a prop, killing him instantly.

Joseph Depedaro fell into the conveyors at the North American Washery, although he had been ordered not to go near them, as the culm he was wheeling was blocking up the conveyor line, and should have been dumped at the foot wheel. In spite of his orders he went twenty feet beyond the foot wheel, and when he fell he was dragged around the wheel and killed.

John Pelkis, a miner at No. 1 Shaft, Kingston Coal Company, was struck by a small piece of coal flying from a blast on December 30. The injury he received seemed very slight, as there was only one cut visible on his head, but he died December 31.

Improvements Made by the Lehigh and Wilkes-Barre Coal Company During the Year 1902.

Hollenbeck No. 2.—Erection of new boiler house at shaft and the installation of two batteries of water tubular boilers of 500 horsepower each, with a forced fan draft system, and under ash ducts.

A second opening from the top split to the bottom split in Red Ash seam, No. 2 Tunnel, east, to provide ventilation for these workings.

Extension of No. 2 Slope on a grade of seven degrees through rock, from the bottom split to the bottom split in the Red Ash seam, cutting top split of Red Ash seam. This extension was made for the purpose of opening up a larger area for No. 2 Slope.

South Wilkes-Barre No. 5.—Erection of a 35-foot Guibal fan at No. 1 air shaft for ventilating western portion of South Wilkes-Barre mine.

Stanton No. 7.—Erection of forced fan draft system at shaft boiler house.

Sugar Notch No. 9.—Erection of new boiler house and installation of two batteries of tubular boilers of 500 horse power each, with a forced fan draft system and under ash ducts.

Lance No. 11.—Erection of new boiler house at shaft and installation of one battery of 500 horse power water tubular boilers.

A second opening from the Five Foot to the Stanton seam, for the purpose of ventilation.

Wanamie No. 18.—Erection of ten double blocks of houses for the use of employes.

A return airway from the Red Ash to the Ross seam at No. 19 Slope, for the purpose of ventilation.

Maxwell No. 20.—Erection of a forced fan draft system in shaft boiler house.

Erection of new engine house, and installation of one pair of 24"x48" double drum friction engines for operating No. 6 Baltimore Slope and No. 7 Red Ash Slope.

Improvement by the Lehigh Valley Coal Company During 1902.

Dorrance Colliery.—An 18 degree rock plane, 375 feet in length, for haulage, has been driven from the Baltimore to the Five Foot seam. Also, a 30 degree rock plane, 225 feet long, for a second opening.

A slope has been extended in the Hillman 300 feet from the crown of the Cemetery anticlinal into the North basin.

A battery of six return tubular boilers of 150 horse power each. The boiler house has been equipped with duplicate feed pumps and forced draught fans.

The tower over the main hoisting shaft was rebuilt.

Franklin Colliery.—No. 8 Slope in top split of Red Ash seam was extended 310 feet, and a rope bore hole, 340 feet in length, completed from the surface to the head of the slope.

The bottom lift, Red Ash gangway, has been reopened for the extension of the unfinished tunnel to the Ross seam.

The head frame and fan at Red Ash second opening have been rebuilt.

A washery is under construction for the preparation of coal from the culm banks.

Conyngham.—No. 4 tunnel, 348 feet long, driven from Abbott to Snake Island seam.

No. 5 tunnel, 108 feet long, driven from Abbott to Snake Island seam.

Three-inch drainage bore hole, 314 feet deep, from Hillman sump to Baltimore seam, to drain water to shaft sump.

Baltimore No. 5.—An entirely new colliery plant, known as Baltimore No. 5, including a 2,000-ton breaker, was built during 1901, and began operations January 1, 1902. This plant prepares the coal from Baltimore tunnel and Baltimore No. 2 workings, which latter breaker was burned on January 26, 1901. The coal is transported overland to the breaker, on a surface railroad, also built

during 1901. An 8" bore hole, 749 feet in depth, was sunk from the surface to the Red Ash seam, for operating a new slope in this seam.

Baltimore No. 2.—The hoisting engine house, fans and fan houses and a new steel tower over-shaft were rebuilt. A new plane was constructed from the top of shaft to railroad level for handling the output of this shaft.

Baltimore Tunnel.—No. 6 Slope, Red Ash seam, extended 300 feet; No. 7 Slope extended 400 feet and No. 10 Plane extended 400 feet.

Improvements at the Collieries of the Susquehanna Coal Company During the Year 1902.

No. 5 Colliery.—Outside: Remodelling breaker and rebuilding jig house.

New boiler plant, 2,000 horse power B. & W. boilers, replacing old cylinder boiler plant.

New compressor house, with two-stage Ingersoll-Sergeant compressor, 20" steam, 20 $\frac{1}{4}$ " and 32 $\frac{1}{4}$ " air, 24" stroke.

Inside: No. 2 Shaft, No. 13 $\frac{1}{2}$ inside slope, opened 400 feet to replace No. 13 Slope closed during strike.

Second opening on head of No. 12 rock plane from Lee to Ross.

No. 4 Shaft: New airway in Ross seam from North tunnel to No. 4 air shaft.

Second opening from South tunnel.

Steel roof supports at lower landing, Shaft No. 4.

No. 4 Slope: Rock plane from Mills to George seams, 434 feet long, 7'x14' on a 20-degree pitch.

No. 6 Colliery.—Outside: New B. & W. boiler plant, 2,000 horse power, with steam lines to No. 6 Shaft, replacing cylinder boilers.

New water hoist tanks in No. 6 North Shaft, which is being made into a water hoist shaft.

No. 7 Colliery.—Outside: New hoisting engines, 32"x48", with 13' cast drum, double air brake, and over-winding device, replacing old 28"x72" engines at No. 1 deep shaft.

Pneumatic haulage plant, No. 1 to No. 3 Shafts, completed with three-stage Norwalk compressor, 22" steam, 16", 5 $\frac{1}{2}$ " and 11 $\frac{1}{2}$ " air, 24" stroke, and Porter pneumatic locomotive, 8"x14", with air line carrying 900 pounds pressure, replacing rope haulage.

Old rope haulage engines repaired and put in place for Slope No. 10.

New lamp house constructed, from old rope haulage engine house.

B. & W. boiler plant, 2,500 horse power, replacing 48 cylinder boilers.

Inside: New openings in Cooper seam, Shaft No. 1, in two places in No. 13 tunnel.

Enlarged main gangway from foot of No. 1 North Shaft to head of No. 9 Slope, and to No. 13 tunnel.

New bore hole, 960 feet deep, from surface to Lee seam, for No. 10 Slope hoisting rope.

Improvements at the Delaware and Hudson Collieries During 1902.

Plymouth No. 2.—Tunnel in G vein through fault 200 feet long, 7'x12'. Tunnel from Red Ash to top split, 275' long, 7'x16'.

Outside: A Norwalk compressor, 24"x14½"x22"x24", was installed for furnishing air for pumping.

Shaft No. 1.—A Dickson compound triple expansion pump, with a capacity of 3,000 gallons per minute, size of pump 15"x26"x16"x48".

Shaft No. 3.—Tunnel from Red Ash seam to top split, 275' long, 7'x16'. A 10"x48"x24" Jeanesville pump was installed at the foot of shaft.

Outside: A new breaker engine, 16"x30", was attached to the old one, changing it into a double engine.

Boston: Reopened tunnel and sank slope in the Bennett seam, and put in a pair of 24"x48" haulage engines to take coal from the slope to the breaker.

Outside: Installed nine new cylinder boilers, 34"x36" in length.

Placed one pair of engines, 26"x48", at the bore hole to hoist out of plane from top split of Red Ash.

Improvements at the Alden.

A slope in the Cooper seam 530' long to reach the basin.

Tunnel 100' long from the Cooper to Hillman seams, 14'x7' through the rock.

There has also been provided for cases of emergency two "Vajen's" improved head protectors.

Improvements at the Delaware, Lackawanna and Western Collieries During 1902.

Woodward.—A new steel trestle connecting the breaker with the shaft, and four batteries of Sterling boilers have been installed. One electric hoist and one electric motor have also been installed at this colliery.

Avondale.—One electric motor has been placed inside.

Auchincloss.—An electric breaker of 500 tons daily capacity has been placed in operation and is giving perfect satisfaction.

Bliss.—One electric motor and air hoist were installed, and outside a 24' ventilating fan.

Several rock tunnels were driven, connecting the shaft seams in the different collieries for the purpose of development and ventilation.

Annual Examination for Mine Foremen.

The examination of applicants for mine foremen and assistant mine foremen was held in this district on June 24, 25 and 26, 1902, at the city hall, Wilkes-Barre.

The board of examiners were, E. E. Reynolds, Mine Inspector; John C. Williams, superintendent; Evan R. Morgan and Robert Watkins, miners.

There were recommended for mine foremen certificates the following:

Michael Poad, John Alexander, John J. Phillips, Thomas Watkins, Charles Renowden, William H. Williams and John R. Price, Wilkes-Barre; James J. Lewis, Thomas F. Hart, William M. Evans, John H. Ingram, E. M. Davis, James Knecht, Richard J. Evans, Evan Thomas and Benjamin J. Davis, Plymouth; Richard Richens and Joseph Richens, Avoca; David Watkins and Lee S. Stoneham, Parsons; Charles Hughes, Luzerne; Robert Hislop, Wyoming; Edward M. Flynn, Chauncey; John J. Morgan, Baldwin Edwards and Eli Rosser, Edwardsdale; Richard M. Rosser and William Walters, Kingston; Thomas Lewis, Nanticoke, and Charles Bauer, Mocan-aqua.

TABLE I—Showing names of operators, railroads, etc., and location of collieries in the Fourth Anthracite District for the year 1902.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Lehigh & Wilkes-Barre Coal Co. Hullmanck. S. Wilkes-Barre. Stanton. Sugar Notch. Lancaster. Nash in ham. Reynolds. Maxwell. Wanamie. Jersey Annex.	Luzerne. Luzerne. Luzerne. Luzerne. Luzerne. Luzerne. Luzerne. Luzerne. Luzerne.	W. J. Richards. W. J. Richards. W. J. Richards. W. J. Richards. W. J. Richards. W. J. Richards. W. J. Richards. W. J. Richards. W. J. Richards.	Wilkes-Barre. Wilkes-Barre. Wilkes-Barre. Wilkes-Barre. Wilkes-Barre. Wilkes-Barre. Wilkes-Barre. Wilkes-Barre.	M. R. Morgans, inside supt.; J. F. Jones, asst. supt.; W. H. Herrington, outside supt.; J. H. Doughty, Jr., asst. outside supt.; C. F. Huber, mining engineer, do.	Wilkes-Barre. Wilkes-Barre. Wilkes-Barre. Wilkes-Barre. Wilkes-Barre. Wilkes-Barre. Wilkes-Barre. Wilkes-Barre.	C. R. R. of N. J. C. R. R. of N. J. C. R. R. of N. J. C. R. R. of N. J. C. R. R. of N. J. C. R. R. of N. J. C. R. R. of N. J. C. R. R. of N. J.
The Delaware & Hudson Co. Corydon mine. Baltimore mine. Plymouth No. 2. Plymouth tunnel. Plymouth No. 2. Plymouth No. 3. Plymouth No. 4. Plymouth No. 5. Boston.	Luzerne. Luzerne. Luzerne. Luzerne. Luzerne. Luzerne. Luzerne. Luzerne. Luzerne.	C. C. Rose. C. C. Rose. C. C. Rose. C. C. Rose. C. C. Rose. C. C. Rose. C. C. Rose. C. C. Rose.	Scranton. Scranton. Scranton. Scranton. Scranton. Scranton. Scranton.	E. R. Pettibone. E. R. Pettibone. E. R. Pettibone. E. R. Pettibone. E. R. Pettibone. E. R. Pettibone. E. R. Pettibone.	Scranton. Scranton. Scranton. Scranton. Scranton. Scranton. Scranton.	Delaware & Hudson R. Delaware & Hudson R. Delaware & Hudson R. Delaware & Hudson R. Delaware & Hudson R. Delaware & Hudson R. Delaware & Hudson R.
Susquehanna Coal Co. Colliery No. 1. Colliery No. 2. Colliery No. 3. Del. Lack. & W. R. R. Co. Woodward. Avalanche. Archbald. Tilgh.	Luzerne. Luzerne. Luzerne. Luzerne. Luzerne. Luzerne. Luzerne. Luzerne.	Morris Williams. Morris Williams. Morris Williams. R. A. Phillips. R. A. Phillips. R. A. Phillips. R. A. Phillips.	Wilkes-Barre. Wilkes-Barre. Wilkes-Barre. Scranton. Scranton. Scranton.	F. H. Kohlbraker. F. H. Kohlbraker. F. H. Kohlbraker. Montrose Barnard. Montrose Barnard. Montrose Barnard.	Nanticoke. Nanticoke. Nanticoke. Wilkes-Barre. Wilkes-Barre. Wilkes-Barre.	Pennsylvania Railroad. Pennsylvania Railroad. Pennsylvania Railroad. Del., Lack. & W. R. R. Del., Lack. & W. R. R. Del., Lack. & W. R. R.
Kinston Coal Co. Kinston No. 2. Kinston No. 4. Gaylord.	Luzerne. Luzerne. Luzerne.	G. M. Williams. G. M. Williams. G. M. Williams.	Kingston. Kingston. Kingston.	Gwilym Edwards. Morgan Kesser. Gwilym Edwards.	Edwardsdale. Kingston. Edwardsdale.	Del., Lack. & W. R. R.
Lehigh Valley Coal Co. Doradine. Franklin.	Luzerne. Luzerne.	S. D. Warriner. S. D. Warriner.	Wilkes-Barre. Wilkes-Barre.	F. E. Zerbe. F. E. Zerbe.	Wilkes-Barre. Wilkes-Barre.	Lehigh Valley Railroad. Lehigh Valley Railroad.

TABLE I - Continued.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Parrish Coal Co. Parrish, Huttonwell,	Luzerne,	H. H. Ashley,	Plymouth,	Thomas R. Evans,	Plymouth,	C. R. R. of N. J.
Red Ash Coal Co. Red Ash,	Luzerne,	M. B. Williams,	Wilkes-Barre,	Edward Smith,	Wilkes-Barre,	C. R. R. of N. J.
Allen, Allen Coal Co.	Luzerne,	R. M. Smith,	Allen Station, .....	.....	.....	C. R. R. of N. J.
West End Coal Co. West End,	Luzerne,	Dr. J. N. Rice,	Santon,	H. A. Fillmore,	Shickelinn,	Pennsylvania Railroad.
Warrior Run Coal Co. Warrior Run,	Luzerne,	Thomas R. Jones,	Wilkes-Barre,	Thomas R. Jones,	Pooley,	Lehigh Valley Railroad
Peterson Coal Co. Haghigh,	Luzerne,	O. Doyle & Foy,	Pittston,	Charles Walker,	Sugar Notch,	C. R. R. of N. J.
Plymouth Coal Co. Toshon,	Luzerne,	James B. Davies,	Plymouth, .....	.....	.....	Del., Lack. & W. R. R.
George F. Lee, Chambers,	Luzerne,	George F. Lee,	Wilkes-Barre,	M. H. Cogan,	Nanticoke,	Del., Lack. & W. R. R.
Shelling washery,	Luzerne,	James Butler,	Plymouth, .....	.....	.....	C. R. R. of N. J.
North American Coal Co.,	Luzerne,	H. W. Samms,	Wilkes-Barre,	J. J. Richards,	Plymouth,	C. R. R. of N. J.

TABLE II—Gives the total number of tons of coal mined in each colliery, number of days worked, number of employees, number of employees killed and injured, number of kegs of powder, etc., used in the Fourth Anthracite District for the year ending December 31, 1902.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at collieries.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number of kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Ledigh and Wilkes-Barre Coal Co.												
Hollenback No. 2.	Luzerne.	149,681	11,254	23,418	175,353	118.45	547	1	10	4,282	5,400	72
South Wilkes-Barre.	Luzerne.	139,564	11,578	28,591	254,423	117.40	954	6	10	4,414	46,303	100
Stanton.	Luzerne.	41,881	11,578	3,258	51,362	51.40	28	1	1	1,213	2,151	74
Sugar Notch.	Luzerne.	111,880	34,667	1,429	151,976	127.80	1,038	1	1	4,885	2,150	85
Lance.	Luzerne.	207,188	21,284	4,119	273,011	120.55	957	11	11	6,120	1,815	131
Nottingham.	Luzerne.	89,962	21,100	1,159	96,841	115.85	371	1	1	2,418	4.33	41
Keyholes.	Luzerne.	140,546	15,752	1,357	211,032	112.70	153	2	1	3,228	6,253	81
Maxwell.	Luzerne.	297,606	16,502	6,281	224,175	112.25	747	2	1	5,651	26,011	77
Jersey Annex No. 8.	Luzerne.	49,67	3,557	110	53,221	153.00	58	1	1	1	1	1
Port banks.	Luzerne.	12			112							
Totals.		1,235,411	125,564	80,270	1,745,205	119.62	6,216	14	45	37,520	109,000	731
Dodwaine and Hudson Canal Co.												
Conyngham.	Luzerne.	165,157	19,871	6,197	191,221	127.0	42	4	1	3,631	1,833	41
Baltimore slope.	Luzerne.	69,801	12,663	2,445	75,511	92.5	111	1	1	2,184	1,113	25
Baltimore No. 2.	Luzerne.						307	1	1	2,367	2,240	41
Baltimore Tunnel.	Luzerne.						118	1	1	1	1	1
Bartons.	Luzerne.	82,452	21,012		104,005	128.0	118	1	1	1	1	1
Bartons No. 3.	Luzerne.						60	1	1	5,157	3,681	71
Bartons No. 4.	Luzerne.	117,576	25,572		141,908	123.3	111	1	1	1	1	1
Plymouth No. 1.	Luzerne.	36,018	36,438	97.3	36,438	97.3	79	1	1	1,770	379	81
Plymouth No. 2.	Luzerne.	134,455	11,031	2,218	148,137	124.0	342	1	1	1	1	1
Plymouth No. 4.	Luzerne.									4,482	291	74

*Totals in this column are averages.

TABLE II—Continued.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at collieries.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number of kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Plymouth No. 5,	Luzerne,	188,240	35,639	3,391	228,271	122.0	460	.....	1	2,614	244	50
Roche,	Luzerne,	112,374	8,179	.....	120,759	108.6	468	.....	2	3,919	419	67
Totals, .....	.....	299,930	137,173	11,036	349,030	118.10	3,772	7	12	28,242	9,337	405
Susquehanna Coal Co.												
Sheet No. 1 colliery No. 5,	Luzerne,	167,928	51,217	15,675	234,818	122.45	1,398	5	9	6,384	17,200	171
Sheet No. 2 colliery No. 5, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sheet No. 3 colliery No. 5, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sheet No. 4 colliery No. 5, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sheet No. 5 colliery No. 5, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sheet No. 6 colliery No. 6,	Luzerne,	192,924	25,180	2,367	220,480	114.6	1,146	2	9	6,727	16,200	102
Sheet No. 7 colliery No. 6, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sheet No. 8 colliery No. 6, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sheet No. 9 colliery No. 6, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sheet No. 10 colliery No. 7,	Luzerne,	231,336	50,618	.....	284,954	139.35	1,576	1	10	5,461	20,500	188
North sheet No. 1, colliery No. 7, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals, .....	.....	595,188	127,074	18,246	740,472	129.8	3,740	8	28	18,575	52,900	411
Delaware, Lehigh and West, R. R. Co.												
Delaware,	Luzerne,	170,616	18,767	3,188	192,571	83.2	1,172	1	3	4,362	2,035	106
Waverly,	Luzerne,	49,673	26,099	761	85,539	73.3	73	1	3	1,292	1,331	64
Waverly,	Luzerne,	6,883	7,700	.....	14,583	22.3	299	1	3	130	10,550	14
Waverly,	Luzerne,	261,012	2,127	3,731	266,870	112.87	785	.....	4	5,818	10,285	56
Bliss, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals, .....	.....	427,611	82,693	7,682	517,986	75.76	2,791	2	13	11,562	24,004	220
Kingston Coal Co.												
Kingston No. 1 colliery No. 4,	Luzerne,	233,254	15,000	.....	248,254	124.87	927	4	3	7,893	960	109
Kingston No. 2 colliery No. 4, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kingston No. 3 colliery No. 4, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kingston No. 4 colliery No. 4, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kingston No. 5 colliery No. 4, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kingston No. 6 colliery No. 4, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kingston No. 7 colliery No. 4, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kingston No. 8 colliery No. 4, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kingston No. 9 colliery No. 4, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kingston No. 10 colliery No. 4, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

*Totals in this column are averages.

Gaylord,	Luzerne,	48,030	4,100	2,170	54,320	87.2	282	1	1	1,867	236	36
Shat No. 2, colliery No. 2,	Luzerne,	288,141	6,400	37,211	321,752	144.15	1,075	4	5	8,973	359	128
Totals,	Luzerne,	569,432	27,500	39,401	64,336	118.73	2,284	9	9	18,733	1,546	271
Lehigh Valley Coal Co.,	Luzerne,	13,827	6,885	39,112	181,824	112.8	621	1	3	4,460	24,570	91
Dorrance,	Luzerne,	118,114	16,121	4,440	138,665	129.15	580	1	1	3,918	2,717	85
Totals,	Luzerne,	253,961	23,006	43,552	320,519	116.77	1,151	1	4	8,378	27,287	176
Parrish Coal Co.,	Luzerne,	135,275	12,447	7,815	155,537	110.9	641	1	4	4,881	21,000	98
Bentonwood,	Luzerne,	188,765	17,704	7,532	214,001	117.25	852	1	5	6,069	3,400	104
Totals,	Luzerne,	324,040	30,151	15,347	369,538	114.1	1,493	2	9	10,950	26,200	202
Red Ash Coal Co.,	Luzerne,	19,944	2,464	2,737	135,115	113.9	534	.....	4	2,912	1,150	57
Red Ash No. 1,	Luzerne,	131,921	14,000	3,023	148,947	104.1	559	2	3	3,976	6,000	79
Alden Coal Co.,	Luzerne,	153,122	19,704	4,330	147,225	108.3	712	1	3	1,992	31,370	75
Totals,	Luzerne,	173,828	13,470	1,662	118,890	117.7	435	.....	1	4,115	200	28
Warrior Run Coal Co.,	Luzerne,	16,445	2,209	295	18,880	44.1	296	1	1	895	199	21
Hadleigh,	Luzerne,	93,129	10,685	2,267	106,081	114.8	340	1	1	2,076	500	38
Totals,	Luzerne,	31,110	3,980	654	35,744	105.9	175	1	1	530	1,050	12
Dodson,	Luzerne,	23,426	2,000	.....	35,426	111.4	89	.....	.....	.....	.....	.....
Chauncy,	Luzerne,	52,124	1,450	.....	54,574	71.0	51	.....	1	.....	.....	2
Sterling washery,	Luzerne, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
North American Coal Co.,	Luzerne, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nottingham washery,	Luzerne, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

*Totals in this column are averages

Recapitulation.

Names of Operators and Collieries.	County.											
		Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at collieries.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number of kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Lehigh and Wilkes-Barre.	Luzerne.	1,555,414	129,564	80,230	1,745,208	110.92	6,396	11	45	37,456	100,000	73
Delaware and Hudson.	Luzerne.	829,570	136,171	14,231	983,769	118.41	5,232	1	13	28,212	9,237	18
Susquehanna Coal Co.	Luzerne.	555,188	127,024	18,210	740,422	122.80	7,740	8	28	18,776	55,900	44
Delaware, Lack and West R. R. Co.	Luzerne.	427,011	87,691	7,982	517,684	86.47	7,741	8	13	11,842	24,000	33
Kingst in Coal Co.	Luzerne.	569,435	25,700	20,461	694,733	118.73	284	2	13	18,733	1,540	171
Lehigh Valley Coal Co.	Luzerne.	2,331,611	25,068	42,352	329,519	116.77	1,171	1	9	8,738	27,597	17
Parrish Coal Co.	Luzerne.	234,141	29,171	17,171	390,568	114.10	1,492	4	9	10,300	26,290	292
Miscellaneous Cos.	Luzerne.	616,572	66,493	14,977	700,882	109.83	2,612	12	14	16,490	40,350	310
Washeries.	Luzerne.	86,551	3,179	.....	90,000	106.2	73	1	.....	.....	.....	2
Totals.		5,241,041	624,024	231,375	6,096,429	108.76	24,764	52	131	151,356	281,304	2,875

*Totals in this column are averages.

*Totals in this column are averages.

TABLE II—Continued.

Names of Operators and Collieries.	County.	Number of Boilers.			Total horse power.			Locomotives.			Number steam engines of all classes.	Total horse power.	Number pumps delivering water to surface.	Capacity in gallons per minute.	Quantity delivered to surface per minute—gallons.	Number electric dynamos.	Number air compressors.
		Cylindrical.	Tubular.	Horse power.	Horse power.	Horse power.	Total horse power.	Steam.	Air.	Electric.							
Lehigh and Wilkes-Barre	Luzerne	106	61	4,896	11,492	6,589	22,977	9	1	.....	85	29,619	81	18,366	11,015	.....	.....
Delaware and Hudson	Luzerne	119	21	3,571	4,789	8,322	13,111	1	.....	.....	74	10,601	14	11,870	4,331	.....	.....
Susquehanna Coal Company	Luzerne	73	31	4,575	10,874	12,419	23,293	3	.....	.....	74	8,729	14	11,870	4,331	.....	.....
Delaware, Lehigh, and Western R. R. Co.	Luzerne	5	11	136	7,334	1,570	8,040	1	.....	.....	6	8,729	14	11,870	4,331	.....	.....
Kinross Coal Company	Luzerne	128	17	2,950	1,301	1,800	4,051	1	.....	.....	1	8,729	14	11,870	4,331	.....	.....
Lehigh Valley Coal Company	Luzerne	.....	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Parrish Coal Company	Luzerne	.....	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Miscellaneous companies	Luzerne	.....	.....	1,800	.....	.....	1,800	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wabers	Luzerne	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals		484	285	15,041	47,472	63,183	125,706	37	4	.....	82	89,190	81	71,871	36,915	9	2

TABLE III.—Showing the number of each class of employees at each colliery in the Fourth Anthracite District, during the year 1902.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.										Grand total inside and outside.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
		Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
		Mine foreman.	Assistant mine foremen.	Pit bosses and assistants.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	Pumpmen.	Company men.	All other employees.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers (boys).	State pickers (men).	Book-keepers and clerks.	All other employees.	Total outside.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
Lehigh and Wilkes-Barre Coal Co.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													

Plymouth No. 5,	1	1	2	87	110	39	13	1	23	17	293	1	8	12	42	39	1	64	167	469
Boston,	1	1	1	97	102	41	14	2	37	19	315	1	6	10	62	17	1	56	153	468
Totals,	2	2	24	854	788	331	132	1	286	194	2,611	8	48	123	352	163	8	409	1,141	3,752
Susquehanna Coal Co.																				
Colliery No. 5,	2	2	10	275	320	88	35	13	94	95	915	1	28	48	137	14	4	201	423	1,368
Colliery No. 6,	3	1	6	280	257	106	4	4	80	79	829	1	25	28	132	1	4	176	37	1,116
Colliery No. 7,	2	2	10	286	321	98	63	7	69	117	985	1	32	35	113	13	4	193	391	1,376
Totals,	7	5	26	860	898	292	101	24	243	291	2,749	3	85	111	382	28	12	570	1,191	3,940
Del., Lack'a and Western.																				
Woodward,	2	7	274	270	92	45	5	5	197	.....	592	1	6	22	100	7	3	141	280	1,172
Archilles,	1	3	51	125	21	16	5	20	152	144	444	1	5	23	43	.....	2	19	80	280
Archilles,	1	2	22	36	12	6	.....	73	20	152	144	1	5	23	43	.....	2	19	80	280
Bliss,	1	1	5	213	165	61	20	2	64	11	157	1	6	13	115	18	2	88	243	788
Totals,	5	1	17	598	596	198	87	12	359	163	2,036	4	21	69	272	25	8	329	728	2,764
Kingston Coal Co.																				
No. 4 colliery,	2	5	237	161	66	18	8	.....	.....	85	582	2	11	21	114	.....	2	195	315	997
Gaylord,	1	.....	57	30	28	6	.....	.....	.....	27	149	1	5	8	70	.....	1	48	173	282
No. 2 colliery,	3	2	301	192	104	54	6	.....	51	27	740	2	19	15	166	.....	3	110	335	1,075
Totals,	6	7	595	383	198	78	11	.....	51	139	1,471	5	35	44	340	.....	6	373	813	2,284
Lehigh Valley Coal Co.																				
Dormant,	2	6	172	88	78	28	2	.....	86	18	440	1	11	16	41	15	4	93	181	621
Franklin,	1	1	2	118	90	56	23	6	16	72	335	1	14	10	23	3	3	89	145	53
Totals,	3	1	8	255	178	134	51	8	102	90	825	2	25	26	66	18	7	182	326	1,151
Parrish Coal Co.																				
Parrish,	1	1	5	151	123	52	22	4	93	.....	472	2	1	8	58	32	4	49	169	641
Buttonwood,	1	2	6	199	174	67	51	1	150	.....	651	1	7	12	70	35	3	72	290	851
Totals,	2	3	11	350	307	119	83	5	243	.....	1,123	2	2	15	27	128	7	121	369	1,492
Red Ash Coal Co.																				
Red Ash No. 2,	2	1	.....	109	116	40	8	3	42	5	325	1	1	9	10	46	35	2	104	298
Alden Coal Co.																				
Alden,	1	1	6	150	124	54	28	2	20	21	407	1	1	12	19	25	20	6	68	172
West End Coal Co.																				
West End,	1	2	1	154	143	59	14	2	27	58	461	1	1	15	21	30	25	3	155	251
Warrior Run Coal Mining Co.																				
Warrior Run,	1	1	2	100	100	18	26	4	25	17	294	1	1	5	12	38	18	3	63	111
Hadleigh,	1	1	1	58	8	17	4	2	10	9	111	1	1	3	8	43	7	1	25	89

TABLE III—Continued.

Names of Operators and Col- lories.	County	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.										(Grand total, inside and outside.	
		Mine foremen.	Assistant mine foremen.	Five bosses and assistants.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	Pumpmen.	Company men.	All other employes.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers (boys).	State pickers (men).	Bookkeepers and clerks.	All other employes.	Total outside.		
Plymouth Coal Co. Dodson,	Luzerne, ..	1	1	2	88	80	28	18	4	27	9	270	1	1	6	16	70	10	2	26	125	396	
George F. Lee, Chauncey,	Luzerne, ..	1	.....	2	34	51	9	2	.....	9	.....	108	.....	1	5	3	28	5	1	26	69	177
Sterling washery, North American washery, ..	Luzerne, .. Luzerne, ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	7	6	.....	1	34	51	
Recapitulation.																							
Lehigh and Wilkes-Barre Coal Co.,	Luzerne, ..	10	11	54	1,047	1,188	451	326	22	615	257	4,616	5	10	51	497	618	137	23	646	1,680	6,296	
Delaware and Hudson,	Luzerne, ..	9	4	24	824	788	33	132	19	286	194	2,611	.....	8	48	13	382	163	8	479	1,111	3,752
Susquehanna Coal Co.,	Luzerne, ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Del., Lehigh & West. R. R. Co.	Luzerne, ..	1	1	17	866	798	12	878	1	375	153	2,093	.....	3	93	11	379	25	12	279	788	2,761
Kingston Valley Coal Co.,	Luzerne, ..	6	.....	.....	593	583	198	78	.....	51	124	1,451	.....	4	35	44	256	.....	6	357	813	2,881
Parish Coal Co.,	Luzerne, ..	.....	.....	.....	8	250	178	14	8	102	91	1,825	.....	3	25	26	66	18	7	182	336	1,151
Parish Coal Co.,	Luzerne, ..	.....	.....	.....	11	330	397	119	83	213	91	1,133	.....	2	5	27	138	67	7	121	299	1,492
M. Seashore companies, Washeries,	Luzerne, ..	.....	.....	.....	14	65	62	233	107	170	11	1,977	.....	6	55	89	250	129	18	40	1,035	3,012
Totals,	Luzerne, ..	59	32	194	5,899	4,957	1,958	990	117	2,048	1,251	17,408	8	13	346	696	2,464	556	92	3,161	7,356	24,764	

Recapitulation.

TABLE III—Continued.

Names of Operators and Collieries.	County.	Number of Days Worked Each Month in Breaker.												
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Lehigh and Wilkes-Barre Coal Co.,	Luzerne,	17.0	15.9	19	17.7	6.1	.....	.....	.....	6	6.1	17.9	19.7	115.9
Delaware and Hudson,	Luzerne,	18.86	15.7	17.3	19.2	7.2	.....	.....	.....	1.18	2.57	17.3	18.1	118.4
Susquehanna Coal Co.,	Luzerne,	21.38	18.65	16.3	19	6.6	.....	.....	.....	.....	3.57	19.3	18.4	133.8
Dr. L. Lack's and Western R. R. Co.,	Luzerne,	19.9	13.6	1.97	6.22	2.38	.....	.....	.....	.....	5.49	19.3	17.25	86.47
Kingston Coal Co.,	Luzerne,	17.7	18.23	13.86	18.33	5.98	.....	.....	.....	.....	7	17.5	17.05	118.77
Lehigh Valley Coal Co.,	Luzerne,	19.67	17.15	12.85	18.77	6.77	.....	.....	.....	.....	3.53	19.62	20.95	116.77
Parrish Coal Co.,	Luzerne,	19	17.35	12.25	17.0	7.17	.....	.....	.....	.....	2.75	1.4	19	14.0
Miscellaneous companies,	Luzerne,	17.1	15.45	12.62	17.0	5.38	.....	.....	.....	.....	2.61	13.98	17.78	109.3
Washo Etes,	Luzerne,	7.5	2.75	7	11.25	5.65	.....	.....	.....	7.8	18.55	27.55	18.37	106.2
Totals and averages,	.....	17.8	16.44	12.11	17.22	6.15	.....	.....	.....	49	4.18	16.4	18.44	108.76

TABLE IV.—List of fatal accidents that occurred in and about the mines of the Fourth Anthracite District for the year ending December 31, 1902.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan. 3	Edward McGrath,	American,	Fuelman,	17	S.	...	...	Maxwell,	Luzerne,	Struck by a derrick post when riding on a locomotive at breaker.
8	George Yacobiou,	Slavonic,	Laborer,	37	M.	1	2	No. 7 breaker, Nanticoke.	Luzerne,	Run over by a car at head of dirt plane.
10	Mike Screen,	Italian,	Miner,	38	M.	1	6	Wauanmie No. 18, Conyngham.	Luzerne,	Instantly killed by a fall of coal.
15	William J. George,	Welsh,	Miner,	24	S.	...	...	Shaft No. 4, Kingstons.	Luzerne,	Instantly killed by a premature blast.
22	Adam Newalls,	Lithuanian,	Co. man,	22	S.	...	...	...	Luzerne,	Caught between car and rib.
24	Thomas Parasucy,	Polish,	Laborer,	25	S.	...	...	Avondale,	Luzerne,	Killed by a fall of rock.
27	Uko Tokar,	Greek,	Miner,	32	S.	1	1	Allen No. 2,	Luzerne,	Killed by a fall of rock.
31	Joseph Marshall,	Irish,	Miner,	28	S.	...	...	Allen No. 1,	Luzerne,	Killed by a fall of bone and clad.
3	John Kasamovitch,	Lithuanian,	Miner,	24	S.	...	...	Hudson,	Luzerne,	Killed by a blast through a cross-heading.
8	John Vascavitch,	Polish,	Laborer,	65	S.	...	...	No. 3 breaker, Nanticoke.	Luzerne,	Killed between cars at the head of the culm dump.
8	Joseph Merlings,	Polish,	Laborer,	20	S.	...	...	Hadleigh,	Luzerne,	Fatally injured by a fall of rock at the face.
15	Thomas Timlin,	Irish,	Miner,	35	S.	...	...	Conyngham,	Luzerne,	Back and leg broken by a fall of coal.
16	Edward Brom,	English,	Fire boss,	37	M.	1	4	No. 2 Plymouth, D. & H. C. Co.	Luzerne,	Killed by an explosion of fire damp while making his rounds.
18	Jacob Babetski,	Polish,	Laborer,	26	S.	...	...	No. 6 slope, Glen Lyon.	Luzerne,	Killed by a fall of coal.
19	Peter Zieffler,	Polish,	Laborer,	38	M.	1	...	Woodward,	Luzerne,	Instantly killed by a fall of coal.
22	Paul Dickey,	Slavonic,	Driver,	21	S.	...	...	Kingston No. 1,	Luzerne,	Run over by cars.
26	Thomas Gibson,	American,	Doorboy,	14	S.	...	...	Stanton No. 7,	Luzerne,	Crushed between cars. Died at home, Feb. 28th.
March 10	George B. Rice,	American,	Picker tender,	20	S.	...	...	West End,	Luzerne,	Caught by a runaway car at the foot of the culm plane.
17	David Hawkins,	English,	Slate picker,	13	S.	...	...	Gaylord,	Luzerne,	Ran over by a mine car at foot of breaker plane.
18	Joseph Buekus,	German,	Slate picker,	13	S.	...	...	Breaker No. 5, Nanticoke.	Luzerne,	Displaced by the conveyors through the sprocket wheel.
27	Richard Hughes,	Welsh,	Miner,	47	M.	1	...	No. 3 shaft, Kingstons.	Luzerne,	Instantly killed by a fall of middle rock.
April 3	Simon Thomas,	Polish,	Miner,	39	M.	1	4	Hollenback,	Luzerne,	Killed by a fall of coal.

12	Charles Suchoski,	Polish,	Miner,	27	S.	1	4	Maxwell, Slope No. 6, Susq. Coal Co.	Luzerne.	Instantly killed by a fall of coal. Fell down the slope.
18	Joseph Vizgar,	Lithuanian,	Miner,	37	M.	1	4	Slope No. 4, Susq. Coal Co.	Luzerne.	Killed by a fall of rock.
22	Adam Markopski,	Polish,	Miner,	27	S.	1	7	Shaft No. 2, Susq. Coal Co.	Luzerne.	Caught between cars and instantly killed.
26	John Rygualeki,	Polish,	Co. man,	50	M.	1	7	Buttress Coal Shaft No. 4, Kings- ton.	Luzerne.	Run over by a loaded car on the gangway. Caught between bumpers of cars on the gangway.
28	Harry Huxie,	American,	Driver,	15	S.	1	7	Chauncy, Parrish,	Luzerne.	Run over by cars at mouth of tunnel.
May	Edward Roberts,	Welsh,	Runner,	16	S.	1	6	Shaft No. 2, Susq. Coal Co.	Luzerne.	Caught between bucket and top of fan shaft.
6	John Mooney,	American,	Slate picker	17	S.	1	6	Dorrance,	Luzerne.	Run over by cars on No. 5 slope.
Aug.	John Schmitt,	Prussian,	Contractor,	54	M.	1	6	Sugar Notch, Conyngham, Baltimore No. 5, outside.	Luzerne.	Fell in the sump and was so badly scalded that he died.
Oct.	John Pollic,	Polish,	Co. laborer,	40	S.	1	6	So. Wilkes-Barre Baltimore No. 2, Wanamie,	Luzerne.	Instantly killed by a fall of coal. Instantly killed by a fall of rock. Run over by a mine locomotive.
30	Arthur Evans,	Welsh,	Runner,	38	S.	1	6	Stanton,	Luzerne.	Caught between cage and bunton.
Nov.	Andrew Mathews,	Slavonic,	Miner,	55	M.	1	6	So. Wilkes-Barre Baltimore No. 2, Wanamie,	Luzerne.	Instantly killed by a fall of coal.
3	James Boyle,	Irish,	Laborer,	22	S.	1	6	Stanton,	Luzerne.	Instantly killed by a fall of coal.
12	Carl Grechis,	Hungarian,	Co. laborer,	39	S.	1	6	Stanton,	Luzerne.	Fatally injured by a premature blast. Died Dec. 10, 1902.
24	John Swantz,	Polish,	Miner,	48	M.	1	7	Stanton,	Luzerne.	Caught between cage and bunton.
4	Frank Mulligan,	Irish,	Laborer,	26	S.	1	7	Stanton,	Luzerne.	Instantly killed by a fall of coal.
6	John Kani,	Polish,	Miner,	44	M.	1	7	Stanton,	Luzerne.	Fatally injured by a premature blast. Died Dec. 10, 1902.
6	David C. Davis,	Welsh,	Laborer,	29	S.	1	7	Stanton,	Luzerne.	Fell down the shaft in stepping off the bucket.
9	Mathew Phillips,	Welsh,	Miner,	38	M.	1	3	So. Wilkes-Barre Stanton,	Luzerne.	The accident caused by the explosion of a 50 lb. case of dynamite.
9	James McGlynn,	Irish,	Laborer,	28	M.	1	3	So. Wilkes-Barre Stanton,	Luzerne.	Fatally injured by a fall of roof.
9	Arthur Jones,	Welsh,	Trackman,	26	S.	1	3	So. Wilkes-Barre Stanton,	Luzerne.	Instantly killed by cars.
9	Robert Humbleby,	Scottish,	Carpenter,	60	M.	1	3	So. Wilkes-Barre Stanton,	Luzerne.	Fell down the elevator shaft and was in- stantly killed.
9	Charles Stafford,	American,	Laborer,	33	M.	1	3	So. Wilkes-Barre Stanton,	Luzerne.	Loaded car jumped the track at the head buck; killing him instantly.
11	Peter Perhavage,	Lithuanian,	Miner,	43	M.	1	3	So. Wilkes-Barre Stanton,	Luzerne.	Fell into conveyor line and instantly killed.
11	Benjamin Davis,	Welsh,	Laborer,	46	M.	1	3	So. Wilkes-Barre Stanton,	Luzerne.	Fatally injured by a premature blast. Died Dec. 31st, 1902.
11	Anthony Perak,	Polish,	Laborer,	46	M.	1	3	So. Wilkes-Barre Stanton,	Luzerne.	
12	Thomas Pasak,	Polish,	Laborer,	40	S.	1	3	So. Wilkes-Barre Stanton,	Luzerne.	
12	James Sullivan,	Irish,	Slate picker,	38	S.	1	3	So. Wilkes-Barre Stanton,	Luzerne.	
22	James Dudson,	English,	Laborer,	21	S.	1	3	So. Wilkes-Barre Stanton,	Luzerne.	
30	Joseph Dredaro,	Italian,	Laborer,	48	M.	1	3	So. Wilkes-Barre Stanton,	Luzerne.	
30	John Felski,	Lithuanian,	Miner,	40	M.	1	3	So. Wilkes-Barre Stanton,	Luzerne.	

TABLE V.—List of non-fatal accidents in and about the mines of the Fourth Anthracite District for the year ending December 31, 1902.

Date of accident	Name of Person.	Nationality by birth.	Occupation.	Ave.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan 4	John Keys,	American,	Slate picker,	11	S	Bliss,	Luzerne,	Leg broken; caught by a scraper in the break.
5	David T. Thomas,	Welsh,	Driver,	1	S	Nottingham,	Luzerne,	Kicked by a mule.
7	David E. Jones,	Welsh,	Mine foreman,	39	M	No. 1 shaft, Sus. Coal Co.,	Luzerne,	Burned on hands and face.
8	William Carpenter,	English,	Miner,	6	M	Parrish,	Luzerne,	Hand fractured by a fall of roof.
8	Elmer Bredin,	American,	Laborer,	20	S	Auchincloss,	Luzerne,	Fell in front of a culm car, and his shoulder was broken.
10	Mike Hamula,	Slovak,	Miner,	22	M	No. 3 shaft, Kingston,	Luzerne,	Struck on head by a fall of rock.
10	Charles Askew,	American,	Blacksmith,	2	M	Parrish,	Luzerne,	Back broken by a fall of rock.
10	Isaiah Blom,	Polish,	Miner,	3	M	Shaft No. 6, Sus. Coal Co.,	Luzerne,	Ribs broken by a fall of coal.
11	Rowland Hughes,	Welsh,	Laborer,	13	S	Woodward,	Luzerne,	Arm broken; struck by a rope on the slope.
13	Peter Sombrowski,	Polish,	Laborer,	34	M	Baltimore tunnel,	Luzerne,	Leg broken by a fall of coal.
14	Samuel Gratz,	Italian,	Driver,	29	S	Lae,	Luzerne,	Leg broken; thrown from a trip of cars.
14	Joseph Levandierski,	Polish,	Miner,	22	M	No. 1 shaft, Sus. Coal Co.,	Luzerne,	Culm bar broken by a fall of rock.
14	Thomas Judas,	Polish,	Miner,	22	M	Parrish,	Luzerne,	Leg broken by a fall of rock.
18	George Simons,	Lithuanian,	Laborer,	22	M	Lae,	Luzerne,	Leg broken by a fall of rock.
20	Joseph Czapinski,	Polish,	Miner,	23	S	Bartonwood,	Luzerne,	Shot in the head by a premature blast.
21	Thomas Cron,	English,	Driver,	23	S	No. 1 shaft, Sus. Coal Co.,	Luzerne,	Struck by a mule.
22	George Gerski,	Polish,	Miner,	35	S	Stanton,	Luzerne,	Burned on hands and face by an explosion of gas.
23	Joseph Jacoboskie,	Polish,	Miner,	43	M	Bartonwood,	Luzerne,	Leg mangled by a fall of rock; amputated at the City Hospital.
27	Mike Seaman,	American,	Laborer,	40	M	South Wilkes-Barre,	Luzerne,	Head and thumb fractured; struck by a prop.
28	Charles Maxwell,	American,	Carpenter,	20	M	No. 6 breaker, Sus. Coal Co.,	Luzerne,	Fell 40 feet from a trestle and his head was injured.
28	Anthony Lavada,	Lithuanian,	Driver,	22	S	Nottingham,	Luzerne,	Left arm broken by a car.
29	John E. Williams,	English,	Miner,	20	M	Aldan No. 2 shaft,	Luzerne,	Leg broken by a fall of rock.
1	Harry Partington,	American,	Culm driver,	16	S	Plymouth No. 2, D. and H.,	Luzerne,	Leg broken; thrown from a culm car.
3	Thomas E. Davis,	Welsh,	Tracklayer,	40	M	Red Ash No. 1,	Luzerne,	Bones in left foot broken; struck by a T rail.
4	Stanley Gizarra,	Gallian,	Laborer,	43	M	Tunnel No. 6, Sus. Coal Co.,	Luzerne,	Thigh and two ribs broken by a fall of rock.

4	Mike Bultrions.	Polish.	Miner.	28	M	Lance.	Luzerne.	Both hands mashed by a car.
4	Thomas Moon.	Irish.	Miner.	19	M	Warrior Run.	Luzerne.	Leg broken by a premature blast.
6	John Kayser.	American.	Runner.	22	M	Reynolds.	Luzerne.	Leg broken by a fall of rock.
8	James McCormott.	Irish.	Lab-er.	24	M	Chamney.	Luzerne.	Shipped and his ankle was broken while
28	Edix Rosalski.	Polish.	Miner.	20	M	Sugar Notch.	Luzerne.	Shipped and his ankle was broken while
13	John Lickis.	Lithuanian.	Lab-er.	33	F	Nottingham.	Luzerne.	Burned on face and hands by an explosion of gas.
14	Ray Lewis.	American.	Runner.	22	F	Reynolds.	Luzerne.	Finger cut off by a lump of coal on a car.
15	William Warner.	English.	Lab-er.	17	F	Sugar Notch.	Luzerne.	Collar bone broken between car and rib.
17	Edmund Williams.	English.	Run engineer.	66	M	No. 3 Plymouth, D and H.	Luzerne.	Right arm cut off; caught by an engine.
17	James Casse.	Welsh.	Miner.	13	F	No. 1 shaft, Sus. Coal Co.	Luzerne.	Rib run over; fell from a plank.
21	Frank Stach.	American.	State picker.	13	F	Maxwell.	Luzerne.	Arm broken while sliding down the chute.
21	John Sherick.	Polish.	Helper.	1	M	South Wilkes-Barre.	Luzerne.	Leg broken; run over by loaded cars.
1	Charles Price.	Russian.	Car leader.	6	M	Butt-nwood.	Luzerne.	Leg broken by a prop fall on it.
3	John Davies.	American.	Lab-er.	21	M	No. 4 shaft, Kingston.	Luzerne.	Leg broken by a fall of eld.
10	Charles Briggs.	American.	Driver boss.	27	M	No. 6 shaft, Sus. Coal Co.	Luzerne.	Leg and arm broken by a fall of rock.
12	Edward O'Donnell.	Welsh.	Leader.	2	F	West End.	Luzerne.	Right wrist broken by a runaway car.
12	Paul Sherman.	Irish.	Fire boss.	11	M	Hadleigh.	Luzerne.	Right wrist broken by a runaway car.
12	Stanley Fisher.	Russian.	Lab-er.	3	M	Red Ash No. 2.	Luzerne.	Thigh broken by a fall of rock.
13	Steve Guma.	Hungarian.	Miner.	3	M	Lance.	Luzerne.	Cut on right knees by a fall of coal.
13	John Evans.	Welsh.	Lab-er.	31	M	No. 6 shaft, Sus. Coal Co.	Luzerne.	Leg broken by falling.
18	John Lasko.	Polish.	Miner.	1	M	Nottingham.	Luzerne.	Leg broken by rails falling from a car.
18	Thomas O'Keefe.	Irish.	Miner.	1	M	Red Ash No. 2.	Luzerne.	Arm fractured by a fall of slate.
19	Thomas Rogers.	English.	Driver.	13	M	No. 4 Plymouth, D. and H.	Luzerne.	Compound fracture of the leg, necessitating amputation.
19	Thomas McKelvey.	Irish.	Driver.	1	M	West End.	Luzerne.	Arm broken by a premature blast.
19	Simon B. Wallack.	Russian.	Lab-er.	6	M	Kingston No. 2 breaker.	Luzerne.	Arm broken by a fall of eld.
21	Robert Good.	American.	Driver.	3	M	Auchincloss.	Luzerne.	Fingers had had while blocking a car.
26	Wade Barker.	Polish.	Miner.	2	F	No. 6 shaft, Sus. Coal Co.	Luzerne.	Ankle crushed between cars.
27	Edward Watkins.	American.	Driver.	2	F	Dorran.	Luzerne.	Thigh broken by explosion.
27	Frank Litch.	Welsh.	Miner.	1	M	No. 4 shaft, Sus. Coal Co.	Luzerne.	Thigh broken by car and run over.
27	John Y. Williams.	Welsh.	Miner.	2	M	West End.	Luzerne.	Leg broken by a fall of roof.
27	Green H. Williams.	Welsh.	Miner.	3	M	Maxwell.	Luzerne.	Leg broken by a fall of rock.
27	Anthony Orlin.	Hungarian.	Miner.	3	M	Nottingham.	Luzerne.	Leg broken; caught between timbers in the yard.
30	Thomas Henshek.	Slavonic.	Timber cutter.	1	M	Maxwell.	Luzerne.	Leg broken by a fall of rock.
10	William J. Morgan.	English.	Driver.	1	M	No. 1 shaft, Sus. Coal Co.	Luzerne.	Kicked by a mule.
11	John E. Thomas.	Welsh.	Miner.	1	F	South Wilkes-Barre.	Luzerne.	Thigh broken by a fall of coal.
12	John C. Thomas.	Irish.	Miner.	1	F	Lance.	Luzerne.	Leg broken by a fall of coal.
15	John Sherlock.	Irish.	Driver.	1	F	Shaft No. 1, Sus. Coal Co.	Luzerne.	Injured; run over by a car.
16	Thomas Kilmorris.	Irish.	Miner.	1	F	Shaft No. 4, Kingston.	Luzerne.	Cut on head by a mule.
18	Lewis T. Ford.	American.	Driver.	1	F	Shaft No. 2, Sus. Coal Co.	Luzerne.	Kicked by a mule.
18	George Henson.	Polish.	Driver.	1	F	Shaft No. 2, Sus. Coal Co.	Luzerne.	Kicked by a mule.
23	Leo Blazarski.	Polish.	Driver.	1	F	Shaft No. 2, Sus. Coal Co.	Luzerne.	Kicked by a mule.
23	Domnick Smith.	Polish.	Miner.	1	F	Nottingham No. 2.	Luzerne.	Ankle broken by a fall of bone.
28	John Costello.	Polish.	Footman.	1	F	Nottingham.	Luzerne.	Skull fractured by a fall of bone.
28	John Doolan.	Polish.	Miner.	1	F	Nottingham.	Luzerne.	Shank fractured by a fall of top slate.
28	William Hahn.	American.	Driver.	1	F	No. 5 Plymouth, D. & H.	Luzerne.	Hand caught between cars, necessitating amputation.
28	Peter Wallace.	American.	Outside laborer.	37	M	Auchincloss.	Luzerne.	Collar bone broken; ditch caved in.

Mar.

April

19	Dec.	Edward Fitzpatrick, ..	American, ..	Slate picker, ..	16	S.	Plymouth No. 3, D. & H., ..	Luzerne, ..	Bumped between cars and his leg was broken.
20		William Kelly, ..	American, ..	Driver, ..	2	S.	Plymouth No. 4, D. & H., ..	Luzerne, ..	Collar bone broken; thrown from a mule.
25		Adam Wampawa, ..	Polish, ..	Miner, ..	2	M.	Slope No. 4, Sus. Coal Co., ..	Luzerne, ..	Hip dislocated by a fall of rock.
25		John Skay, ..	Lithuanian, ..	Miner, ..	4	M.	Franklin, ..	Luzerne, ..	Left leg broken by a fall of rock.
25		Hugh Ward, ..	Irish, ..	Driver, ..	3	M.	Gay rd.	Luzerne, ..	Foot crushed by a fall of rock.
25		Joseph Hagdon, ..	Slavonic, ..	Miner, ..	23	S.	Nottingham, ..	Luzerne, ..	Foot crushed by a fall of coal, necessitating amputation.
28		Peter Mazula, ..	Slavonic, ..	Driver, ..	19	S.	No. 4 shaft, Kingston, ..	Luzerne, ..	Leg broken; between cars.
2		John Dwyer, ..	Irish, ..	Pumpman, ..	3	M.	Avondale, ..	Luzerne, ..	They were riding a car down the slope; the car ran away and they were badly bruised.
2		Frank Trimble, ..	American, ..	Machinist, ..	3	M.	Avondale, ..	Luzerne, ..	Head fractured; between loaded cars.
2		Martin Curley, ..	American, ..	Laborer, ..	24	S.	Boston, ..	Luzerne, ..	Shoulder bone broken; struck by a car.
4		William Makoski, ..	Polish, ..	Driver, ..	16	S.	Slope No. 6, Sus. Coal Co., ..	Luzerne, ..	Leg broken by a casting; falling on him.
4		George German, ..	American, ..	Slate picker, ..	1	S.	Wanamie breaker, ..	Luzerne, ..	Leg broken; fell under a car riding out the gangway.
6		George Griffiths, ..	American, ..	Door boy, ..	1	S.	Avondale, ..	Luzerne, ..	Hand mashed while blocking a car at the foot of the shaft.
8		Edward Conyard, ..	American, ..	Runner, ..	20	S.	Dorrance, ..	Luzerne, ..	Back sprained and head cut by a car on the rock bank.
8		Levi Andrews, ..	American, ..	Outside laborer, ..	50	M.	Bliss, ..	Luzerne, ..	Burned by an explosion of dynamite.
9		George Knauer, ..	American, ..	Co. laborer, ..	30	M.	South Wilkes-Barre, ..	Luzerne, ..	Head and shoulders badly cut by coal bursting from the face.
9		Evan L. Jones, ..	Welsh, ..	Co. laborer, ..	24	M.	Boston, ..	Luzerne, ..	Head injured; run over by car.
9		Nathan Sweeney, ..	German, ..	Co. laborer, ..	62	M.	Boston, ..	Luzerne, ..	Finger cut off while sprang a car.
10		Frank Kline, Sr., ..	German, ..	Laborer, ..	62	M.	Boston, ..	Luzerne, ..	Hip dislocated by a fall of bone.
10		Reginald Hall, ..	American, ..	Driver, ..	20	S.	Parrish, ..	Luzerne, ..	Badly bruised about the body by a car in the engine plane.
10		John Coolick, ..	Russian, ..	Runner, ..	19	S.	Bottomwood, ..	Luzerne, ..	Finger broken between block and wheel while sprang a car.
11		John Nazemek, ..	Polish, ..	Miner, ..	35	M.	No. 1 shaft, Sus. Coal Co., ..	Luzerne, ..	Squeezed between car and prop at foot of E. py tunnel slope.
11		John Forcaskie, ..	Polish, ..	Laborer, ..	19	S.	No. 3 shaft, Kingston Coal Co., ..	Luzerne, ..	Arm broken and wrist dislocated while playing about the breaker.
13		George Butcher, ..	Welsh, ..	Driver, ..	22	S.	Nottingham, ..	Luzerne, ..	Leg broken by a fall of rock.
17		Simon Frakalos, ..	Polish, ..	Laborer, ..	30	S.	Bliss, ..	Luzerne, ..	Arm broken; fell into sump at foot of breaker.
18		William Madasavick, ..	Polish, ..	Slate picker, ..	13	S.	Woodward, ..	Luzerne, ..	Skull and arm broken; fell into sump at foot of shaft.
19		Phillip Guncher, ..	Polish, ..	Miner, ..	34	M.	Allen shaft No. 1, ..	Luzerne, ..	Shoulder bone broken; fell in jumping from locomotive.
24		Harvey Walck, ..	American, ..	Runner, ..	23	S.	Slope No. 6, Sus. Coal Co., ..	Luzerne, ..	Shoulder and two ribs broken; caught between top of car and door frame.
24		Frank Huber, ..	American, ..	Driver, ..	1	S.	Breaker No. 5, Sus. Coal Co., ..	Luzerne, ..	Run over by a car on the slope.
29		William Edwards, ..	Welsh, ..	Footman, ..	36	M.	Shaft No. 1, Sus. Coal Co., ..	Luzerne, ..	
29		William Boyle, ..	American, ..	Brakeman, ..	17	S.	Breaker No. 5, Sus. Coal Co., ..	Luzerne, ..	
29		James Featherstone, ..	American, ..	Driver, ..	25	S.	H. Hlenback, ..	Luzerne, ..	
30		John Anton, ..	Polish, ..	Laborer, ..	46	S.	Wanamie, ..	Luzerne, ..	



Fifth Anthracite District.

LUZERNE AND CARBON COUNTIES.

Hazleton, Pa., March 11, 1903.

Hon. James W. Latta, Secretary of Internal Affairs:

Sir: I have the honor to submit herewith my first annual report as Inspector of Mines for the Fifth Anthracite District for the year ending December 31, 1902.

It will be seen by the report that there is a great discrepancy in production between this year's report and that of the previous year, which is accounted for by the effect upon the collieries in the early part of the year of heavy rains, which flooded several of them; also, by the anthracite strike, which commenced May 12 and continued until October 22. But a comparison of time worked shows that the production will equal the production of last year for the same period.

The total production in 1902 was 3,190,765 tons, while for 1901 it was 6,374,939 tons, showing that the production for the year 1902 was about one-half that of previous year.

The total number of accidents was 61, of which 26 were fatal and 35 non-fatal, leaving 13 wives widows and 31 children under 16 years of age orphans.

There were 122,722 tons of coal produced per life lost, and 91,165 tons produced per each non-fatal accident.

The number of persons employed was 14,364 for an average of 120.6 days.

There were 47,447 kegs of powder and 459,379 pounds of dynamite used in the mines and about the strippings of the district.

There were few improvements made about the collieries during the year, the operators holding back on account of the strike.

The report also contains the usual tables.

I assumed the duties of the office on September 10, 1902, the former Inspector, Mr. W. H. Davies, having resigned.

Respectfully,

DAVID J. RODERICK,

Inspector.

SUMMARY OF STATISTICS FOR 1902.

Number of mines in district,	97
Number of mines in operation during 1902,	97
Number of tons of coal produced,	3,190,765
Number of tons shipped to market,	2,532,797
Number of tons sold at mines to local trade,	96,334
Number of tons consumed at mines in generating steam and heat,	561,634
Number of persons employed inside the mines,	8,235
Number of persons employed outside,	6,127
Number of fatal accidents inside the mines,	21
Number of tons produced for each fatal accident inside,	151,941
Number of persons employed per fatal accident inside,	684
Number of fatal accidents outside,	5
Number of persons employed per fatal accident outside,	2,873
Number of wives made widows by fatal accidents, ..	13
Number of children orphaned by fatal accidents,	31
Number of non-fatal accidents inside of mines,	22
Number of persons employed per non-fatal accident inside,	653
Number of non-fatal accidents outside,	13
Number of persons employed per non-fatal accident outside,	1,105
Number of steam locomotives used inside,	7
Number of compressed air locomotives used inside, .	11
Number of electric motors used inside,	41
Number of fans used for ventilation,	1
Number of furnaces used for ventilation,	35
Number of gaseous mines in operation during 1902, .	62
Number of non-gaseous mines in operation during 1902,	1

A. Production of Coal During the Year 1902.

Names of Companies.	Tons.
A. Pardee & Co.,	174,547
Coxe Bros. & Co., Incorporated,	469,614
Lehigh Coal and Navigation Company,	544,016
G. B. Markle & Co.,	476,205
Lehigh Valley Coal Company,	496,585

Estate of A. S. Van Wickle,	239,043
Calvin Pardee & Co.,	181,678
Pardee Bros. & Co.,	197,642
Upper Lehigh Coal Company,	159,436
C. M. Dodson & Co.,	118,145
J. S. Wentz & Co.,	31,373
M. S. Kemmerer & Co.,	36,037
W. R. McTurk & Co.,	46,907
Black Creek Coal Company,	12,277
Thomas R. Reese & Son,	7,248
<hr/>	
Total,	3,190,753
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11. Showing the number of fatal and non-fatal accidents inside and outside the mines; number of tons of coal produced per fatal and non-fatal accident inside the mines; number of persons employed inside and outside; and the number employed inside and outside for every fatal and non-fatal accident for each company during 1902.

Names of Companies.	Number of lives lost inside.	Number of lives lost outside.	Total number of lives lost.	Number severely injured inside.	Number severely injured outside.	Total number severely injured inside and outside.	Tons of coal produced per each life lost inside.	Tons of coal produced per serious injury inside.	Number employees inside of mines.	Number employees outside of mines.	Total number employed.	Number of employees inside for each life lost.	Number of employees inside for each severe injury.	Number of employees outside for each life lost.	Number of employees outside for each severe injury.
A. Pardee & Co., Inc.	1	1	2	1	1	2	37,273	35,909	726	236	1,002	347	181	336	3 6
Coke Bros. & Co., Inc.	1	1	2	1	1	2	94,398	117,567	1,144	906	1,806	225	430	366	906
Lehigh Coal and Navigation Co.,	1	1	2	1	1	2	181,331	344,024	1,144	1,037	1,806	225	430	366	1,037
G. B. Markle & Co.	1	1	2	1	1	2	18,335	129,367	1,705	638	2,393	668	285	668	668
Lehigh Valley Coal Co.	1	1	2	1	1	2	218,262	248,262	1,484	638	2,393	668	285	668	668
Estate of A. S. Van Winkle,	1	1	2	1	1	2	119,321	119,321	629	352	1,222	271	142	332	296
Carlton Pardee & Co.,	1	1	2	1	1	2	60,839	36,306	332	43	754	165	3 1	435	166
Pardee Bros. & Co.,	1	1	2	1	1	2	88,731	176,193	332	43	754	165	3 1	435	166
Upper Lehigh Coal Co.,	1	1	2	1	1	2	45,424	176,193	271	305	681	271	345	315	345
C. M. Dodson & Co.,	1	1	2	1	1	2	118,115	33,481	226	184	410	226	75	184	184
John S. Venez & Co.,	1	1	2	1	1	2	19,458	31,373	225	158	383	112	225	158	158
M. S. Kemmerer & Co.,	1	1	2	1	1	2	35,097	36,637	110	115	225	110	110	115	115
W. R. McKim & Co.,	1	1	2	1	1	2	46,907	46,907	176	176	176	176	176	176	176
Black Creek Iron Co.,	1	1	2	1	1	2	12,277	12,277	56	56	109	109	109	109	109
Thos. R. Reese & Co.,	1	1	2	1	1	2	7,248	7,248	7	4	9	7	7	7	7
Totals,	21	5	26	19	15	34	1,036,728	1,613,515	8,227	6,129	14,407	1,507	5,390	6,132	4,972

E. Occupations of Employees Killed or Fatally Injured Inside and Outside the Mines of the Fifth Anthracite District During 1902.

Months	Inside.											Outside.										
	Mine foremen.	Assistant mine foremen.	Fire bosses and assistants.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	Pumpmen.	Company men.	All other employees.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	Slate pickers (boys).	Slate pickers (men).	Book-keepers and clerks.	All other employees.	Total outside.	Grand total.	
January.	1	1	1	1	1	1	1	1	1	2	20	1	1	1	1	1	1	1	2	6	26	
February.	1	1	1	1	1	1	1	1	1	2	20	1	1	1	1	1	1	1	2	6	26	
March.	1	1	1	1	1	1	1	1	1	2	20	1	1	1	1	1	1	1	2	6	26	
April.	1	1	1	1	1	1	1	1	1	2	20	1	1	1	1	1	1	1	2	6	26	
May.	1	1	1	1	1	1	1	1	1	2	20	1	1	1	1	1	1	1	2	6	26	
June.	1	1	1	1	1	1	1	1	1	2	20	1	1	1	1	1	1	1	2	6	26	
July.	1	1	1	1	1	1	1	1	1	2	20	1	1	1	1	1	1	1	2	6	26	
August.	1	1	1	1	1	1	1	1	1	2	20	1	1	1	1	1	1	1	2	6	26	
September.	1	1	1	1	1	1	1	1	1	2	20	1	1	1	1	1	1	1	2	6	26	
October.	1	1	1	1	1	1	1	1	1	2	20	1	1	1	1	1	1	1	2	6	26	
November.	1	1	1	1	1	1	1	1	1	2	20	1	1	1	1	1	1	1	2	6	26	
December.	1	1	1	1	1	1	1	1	1	2	20	1	1	1	1	1	1	1	2	6	26	
Totals.	8	8	8	8	8	8	8	8	8	20	20	1	1	1	1	2	2	2	2	6	26	

G. Nationality of Employes Killed or Fatally Injured Inside and Outside the Mines During 1902.

	Americans.	English.	Scotch.	Irish.	Poles.	Hungarians.	Italians.	Slavs.	Austrians.	Greeks.	Tyrolean.
January,	1				1	1				1	
February,	2					1		1	1		
March,	2	1		1							
April,	1				1			1			
May,	1					1					1
October,			1								
November,	1			1		1	1				
December,	2										
Totals,	11	1	1	2	2	3	1	2	1	1	1

H. Nationality of Employes Severely Injured Inside and Outside the Mines During 1902.

	Americans.	Irish.	Poles.	Hungarians.	Italians.	Slavs.
January,	2	1	1	2	1	1
February,	2			1	4	1
March,	1	1	1			1
April,		1		2		
May,					1	
November,			1	3		
December,	3	1	1		2	
Totals,	8	4	4	8	8	3

Descriptions of Fatal Accidents that Occurred After September 10.

Allen Watson, a pumpman at Lattimer, Pardee Bros. & Co., was instantly killed by a runaway car. The locomotive pushed a trip of empty cars into head of plane. There were three empty cars standing at top when locomotive pushed in, the three empty cars standing on top, which caused the first car to jump over head block and rope, dash down the plane and struck the empty cars at bottom, one of which struck Watson.

James Powell, a loader at Lattimer, was instantly killed by his head having been caught between two stripping dumpers. He thought to assist the driver with his trip, and there was a car standing on the turnout when the driver came out with a trip. Powell stood at this car to make a flying coupling; he made the coupling and raised his head, when it was caught between the small bumpers on the stripping cars. He had been warned not to have anything to do with the cars.

Andro Banko, a hitcher, was fatally injured at Coleraine No. 2 bank. They were slacking two empty cars down a plane to pick up some empty cars standing on a switch on plane, and Banko stood at these cars, with coupling in hand, to make a flying coupling. He was standing below the bumpers of the cars, which were being lowered, consequently the bumpers of the cars running down into the ditch went right over the other bumpers, catching his head, crushing his skull. This man had also been warned by the foreman to let the cars come to a stop before attempting to couple them.

Thomas Conlin, miner, found dead in a breast in No. 1 Colliery, Lehigh Valley Coal Company. His boy, who was his partner, did not report for work on this day. Conlin's daughter tried to persuade her father not to go to work, as he would be working alone. He told her that he would only go and take in the powder which was at bottom of slope. Not returning at the usual time, the girl told some miners, who went to look for him. They found his body at top of chute in his breast; evidently he had died from natural causes, as the keg of powder which he had taken in was not opened, and he had no powder to fire a blast; neither had anything fallen on him. As there was nothing on him when found, the supposition is that he died from natural causes.

Fred. Burgraff, locomotive patcher, was instantly killed at Hazleton Shaft Colliery, on the outside, by being run over by a locomotive. He had ran ahead to turn the switches; when he had them all turned, he attempted to jump on front end, but slipped and fell under; was pushed for some distance and the wheels passed over him. It is customary for the patcher to do his work on the

side where the engineer is, but this time he attempted to get on the other side. The engineer did not see him fall or he might have stopped his engine.

Elmer Karschner and August Strack, carpenters, were fatally injured at Cranberry No. 4 Slope, A. Pardee & Co., by a runaway truck. They, together with several other men, were engaged putting in a pump and had divided themselves into two gangs, one to send the material down and the other stationed at bottom to take it off. When they had sufficient material down for the night, they sent the flat truck up to be taken off, but the men neglected to put the rope to the one side, but pushed the truck far enough to let the man car pass. When this was done, they pushed the man car into top of slope, put the chains on, took the head block off and pushed car over. When they had proceeded down the slope about fifty feet, Karschner and Strack, who were riding on the bumpers, noticed that the rope was not on the pulleys; they stopped the car, had it hoisted up to the apex and put the rope on the shieve. Then proceeded down again without putting block on. When they had reached about fifty or sixty feet down the slope, the truck which was left on top came dashing down upon them. Karschner and Strack, who were riding on the bumpers, were pinned between truck and car until they reached the bottom, and the eight men in the car were powerless to help them. When they reached the bottom they were released from their positions and removed to the Hazleton Hospital. Karschner died just as he reached the institution, and Strack died a few hours later. This accident was due to the oversight of the men in not putting the rope aside when changing the truck for the car, and in not placing the head block on, after they had pushed the car over.

TABLE I—Showing names of operators, railroads, etc., and location of collieries in the Fifth Anthracite District for the year 1902.

Names of Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine
A. Pardoe & Co. Cranberry. East Crystal Ridge.	Luzerne, Luzerne.	Frank Pardoe, Frank Pardoe.	Hazleton, Hazleton.			Loblich Valley Railroad. Loblich Valley Railroad.
Coxe Bros. & Co. (Inc.). Drifton Nos. 1 and 2. Eckley, including Buck Mt. Stockton. Beaver Meadow. Tomhicken. Derringer & Gowan.	Luzerne, Carbon, Luzerne, Carbon, Luzerne, Luzerne, Luzerne.			L. C. Smith, L. C. Smith, L. C. Smith, L. C. Smith, L. C. Smith, L. C. Smith.	Drifton, Drifton, Drifton, Drifton, Drifton, Drifton.	D. S. & S. R. R. D. S. & S. R. R. D. S. & S. R. R. D. S. & S. R. R. D. S. & S. R. R. D. S. & S. R. R.
Loblich Coal & Navigation Co. Collier No. 1. Collier No. 4. Collier No. 5. Collier No. 6. Collier No. 9. Screen building.	Carbon, Carbon, Carbon, Carbon, Carbon, Carbon.	W. D. Zehner, W. D. Zehner, W. D. Zehner, W. D. Zehner, W. D. Zehner, W. D. Zehner.	Lansford, Lansford, Lansford, Lansford, Lansford, Lansford.			C. R. R. of N. J. C. R. R. of N. J. C. R. R. of N. J. C. R. R. of N. J. C. R. R. of N. J. C. R. R. of N. J.
G. B. Markle & Co. Jeddo No. 4 and Elervalp. Hickland No. 2. Hickland No. 5.	Luzerne, Luzerne, Luzerne.	John Markle, Managing partner, do.	Jeddo, Jeddo, Jeddo.	Sidney Williams, Sidney Williams.	Jeddo, Jeddo, Jeddo.	Loblich Valley Railroad. Loblich Valley Railroad. Loblich Valley Railroad.
Loblich Valley Coal Co. Hazleton No. 1. Hazleton shaft. Spring Brook.	Luzerne, Luzerne, Carbon.	S. D. Warriner, S. D. Warriner, S. D. Warriner.	Wilkes-Barre, Wilkes-Barre, Wilkes-Barre.	W. H. Davies, W. H. Davies, W. H. Davies.	Hazleton, Hazleton, Hazleton.	Loblich Valley Railroad. Loblich Valley Railroad. Loblich Valley Railroad.
Est. of A. S. VanWinkle. Mithesville. Coleraine and Evans.	Luzerne, Carbon.	Frank Pardoe, Manager, John Harvey.	Hazleton, Hazleton.	John Harvey.	Hazleton.	Pennsylvania Railroad. P. & R. & L. V. R. R.
Calvin Pardoe & Co. Harwood.	Luzerne.	A. W. Drake.	Lattimer Mines.	Calvin Pardoe, Jr.	Lattimer Mines.	D. S. & S. R. R.
Pardoe Bros. & Co. Lattimer.	Luzerne.	A. W. Drake.	Lattimer Mines.	Calvin Pardoe, Jr.	Lattimer Mines.	D. S. & S. R. R.

Upper Lehigh Coal Co. Upper Lehigh,	Luzerne,	A. C. Lelsenring,	Upper Lehigh,	George Willmot, ...	Upper Lehigh,	C. R. R. of N. J. L. V. R. R. & C. R. R. of N. J.
C. M. Dodson & Co. Beaver Brook,	Luzerne,	E. L. Bullock,	Audentried, .....	.....	.....	Lehigh Valley Railroad.
John S. Wentz & Co. Hazle Brook,	Luzerne,	John L. Wentz, ...	1100 Girard Trust Bldg., Phila.	John Weber,	Hazle Brook,	Lehigh Valley Railroad.
M. S. Kemerer & Co. Sandy Run,	Luzerne,	M. S. Kemerer, ...	Mauch Chunk,	Geo. D. Kugler, ..	Sandy Run,	C. R. R. of N. J.
W. R. McTurk & Co. Star washery,	Carbon,	W. J. Helsor,	Hazleton, .....	.....	.....	L. V. R. R. & C. R. R. of N. J.
Black Creek Coal Co. Rowe colliery,	Luzerne,	James Rowe,	Hazleton, .....	.....	.....	Lehigh Valley Railroad
Harleigh colliery,	Luzerne,	James Rowe,	Hazleton, .....	.....	.....	Lehigh Valley Railroad
Thos. R. Reese & Son. Dusky Diamond,	Luzerne,	Thos. R. Reese, ...	Audentried, .....	.....	.....	Lehigh Valley Railroad

TABLE II.—Gives the total number of tons of coal mined in each colliery, number of days worked, number of employees, number of employees killed and injured, number of kegs of powder, etc., used in the Fifth Anthracite District for the year ending December 31, 1902.

Names of Operators and Collieries	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Cranberry, East Crystal Ridge, Totals,	Luzerne, Luzerne,	111,212 18,733 129,945	34,735 7,154 41,889	2,537 337 2,894	114,884 26,264 174,748	123 123 123	913 149 1,062	2 2	4 1 5	2,785 3 5 3 1 0	29,130 6,355 29,635	123 29 152
Drifton Nos. 1 and 2, Stockton, Eckley, Beaver Meadow, Pottsville, Derringer, Totals,	Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne,	102,704 68,212 99,372 25,117 91,133 359,517 1,080,830	32,577 14,569 25,117 22,121 94,375 19,488 20,785	6,917 2,410 2,876 3,447 15,724 1,544 3,443	112,293 83,213 127,305 116,811 419,616 161,111 127,297	161 94 108 94 111.5 145 125	782 287 341 443 1,866 538 788	1 1 3 1	1 1 1 1	1,9 0 5 3 6 6 1 55 1 96 6 22 780	4 72 730 8,438 10,7 4 5,8 2 30,365 30,900	85 12 47 6 97 2 2 1 0
Lehigh Coal and Navigation Co. Colliery No. 1, Colliery No. 4, Colliery No. 5, Colliery No. 6, Colliery No. 8, Screen building, Totals,	Carbon, Carbon, Carbon, Carbon, Carbon, Carbon,	140,080 12,989 75,193 31,193 118,098 4,743 47,437	19,488 20,785 4,292 10,049 8,561 79,365 19,488	1,544 3,443 2,397 5,319 13,221 13,221 13,221	161,111 127,297 81,902 41,511 132,248 554,911 554,911	145 125 94 48 142 111 111	538 788 198 467 223 2,81 2,81	..... 1 3 3 1	..... 1 ..... ..... ..... ..... .....	..... 780 280 300 450 60 1,800 1,800	30,900 12 7 0 12 7 0 23 0 0 35 0 0 102,850 102,850	1 0 69 12 13 74 370 370

*Totals in this column are averages.
†Jeddo tunnel drainage.

G. B. Markle & Co. Jeddo No. 4, Highland No. 2, Totals,	Luzerne,	168, 011	21, 647	790	†191, 346	99	1, 121	2	4	4 572	46, 272	143
	Luzerne,	136, 88	26, 04	10	†172, 839	100	76	...	1	4, 06	2, 58	7
	Luzerne,	89, 64	18, 45	3, 338	111, 352	113	335	1	1	2, 9 2	6, 11	84
	Luzerne,	405, 04	66, 73	4, 12	476, 207	109	2, 6	3	6	11, 58	54, 87	346
Lehigh Valley Coal Co. Hazleton No. 1, Hazleton shaft, Spring Brook, Totals,	Luzerne,	96, 974	9, 831	34, 617	141, 412	137	61	1	1	3, 603	21, 21	75
	Luzerne,	21, 28	30, 5 4	2, 106	23, 904	141	1, 2	1	1	5, 08	46, 68	92
	Carbon,	76, 22	23, 210	1, 14	101, 181	1, 0	354	...	...	1, 12	1, 1	32
	Carbon,	394, 776	63, 5 5	38, 216	†436, 587	139, 3	2, 222	2	2	10, 814	7, 967	199
A. S. VanWickle Estate. Coleraine, Milnesville, Totals,	Carbon,	121, 222	41, 286	1, 147	†166, 855	146	73	1	2	1, 835	41, 975	85
	Luzerne,	16, 18	55, 647	573	72, 389	62	4, 9	1	...	93	11, 58	41
	Luzerne,	137, 391	19, 433	1, 720	231, 04	1, 4	1, 212	2	2	1, 92	53, 925	126
	Luzerne,	7, 202	930	255	8, 377	156	37	...	1	2, 9	50	10
Black Creek Coal Co. Rowe, Harleigh, Totals,	Luzerne,	3, 388	29	219	3, 460	153	72	...	...	102	22	7
	Luzerne,	10, 5 0	1, 213	474	12, 277	155, 5	109	...	1	361	75	17
	Luzerne,	144, 441	26, 500	737	†181, 678	138	754	2	5	2, 000	22, 600	80
	Luzerne,	13, 063	22, 667	4, 572	†197, 642	17, 4	774	2	4	3, 352	62, 935	84
Upper Lehigh Coal Co. Upper Lehigh, Beaver Brook, Totals,	Luzerne,	130, 919	25, 568	2, 90	159, 427	142, 8	616	1	1	3, 020	7, 967	73
	Luzerne,	91, 636	26, 011	498	†118, 14	123, 3	410	...	3	2, 473	7, 637	57
	Luzerne,	28, 50	2, 370	482	†31, 373	63, 6	383	3	...	259	3, 894	21
	Luzerne,	23, 52	8, 979	3, 835	35, 037	73, 6	235	1	...	368	6, 040	26
J. S. Kemmerer & Co. Sandy Run, Star washery, Totals,	Carbon,	46, 407	1, 560	...	46, 907	176	176	...	1	...	500	12
	Luzerne,	265	490	6, 883	7, 218	274	11	...	...	175	125	9
	Luzerne,	2, 522, 797	561, 634	96, 334	†3, 107, 755	120, 6	11, 361	26	35	47, 417	459, 379	1, 764
	Luzerne, .....	...	...	...	...	...	...	...	...	...	...	...

† Jeddo tunnel drainage.

Totals in this column are averages

Recapitulation.

Names of Operators and Collieries	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employes—tons.	Total production of coal in tons.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
A. Parloe & Co.,	129,765	41,689	2,894	174,548	123	1,022	.....	5	3,170	26,625	152
Coxe Bros. & Co.,	559,717	94,375	15,724	469,613	111.5	1,886	.....	4	6,227	70,365	2,222
Lehigh Coal and Navigation Co.,	47,437	73,365	13,221	5,401	111	2,811	.....	1	1,800	12,300	326
G. H. Markle & Co.,	465,010	(6,731)	4,428	476,207	106	2,333	.....	6	11,585	54,878	306
Lehigh Valley Coal Co.,	381,776	6,395	38,216	4,6587	139.3	2,522	.....	2	1,814	78,667	190
Lehigh Valley Coal Co.,	117,311	19,933	1,720	229,044	101	1,212	.....	2	1,928	53,253	126
Black Creek Coal Co.,	66,400	14,123	1,474	12,277	13.5	619	.....	1	61	75	1
Miscellaneous companies,	638,083	120,723	19,677	778,461	119.1	3,347	.....	11	11,567	111,791	352
Totals,	2,532,797	561,631	96,134	3,180,765	120.6	14,861	26	35	47,447	479,379	1,764

*Totals in this column are averages

TABLE III—Showing the number of each class of employees at each colliery in the Fifth Anthracite District during the year 1902.

Names of Operators and Col- lieries.	County.	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.										Grand total, inside and outside.	
		Mine foremen.	Assistant mine foremen.	Fire bosses and assistants.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	Pumpmen.	Company men.	All other employees.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers (boys).	State pickers (men).	Book-keepers and clerks.	All other employees.	Total outside.		
A. Pardee & Co., Chambersburg, East Crystal Ridge,	Luzerne, Luzerne,	3 1	5 1	2 1	279 49	135 4	57 15	26 9	12 1	15 4	54 4	593 138	1 1	24 4	24 4	32 6	46 6	20 6	3 1	189 11	315 21	903 119	
Totals,		4	6	2	328	184	72	40	13	19	58	726	1	28	28	38	56	20	3	201	436	1,062	
Coxe Bros. & Co., Inc., Dripping Nos 1 and 2, Elk and Buck Mountain, Stockton, Bever Meadow, Tomlinson, Deriniser and Gowan,	Luzerne, Carbon, Luzerne, Luzerne, Luzerne,	2 1 1 1 1	1 1 1 1 2	1 1 1 1 2	179 77 63 9 120	8 9 9 1 20	31 13 1 1 30	16 7 2 2 10	43 2 2 9 56	2 39 57 54 34	48 39 41 3 8	331 1349 140 3 924	1 1 1 1 1	1 1 1 1 1	1 1 1 1 1	39 9 5 15	32 22 28 25 103	25 14 19 11 27	7 1 1 1 1	12 1 1 1 1	34 79 118 88 617	431 156 283 21 169	782 283 311 41 1,806
Totals,		5	4	4	439	46	92	35	56	2	217	900	1	4	68	107	103	49	17	617	966	1,866	
Lehigh Coal and Navigation Co., Colliery No. 1, Colliery No. 4, Colliery No. 5, Colliery No. 6, Colliery No. 9, Screen building,	Carbon, Carbon, Carbon, Carbon, Carbon, Carbon,	3 1 1 1 1 1	1 1 1 1 1 1	6 4 3 2 3 18	172 35 65 44 60	76 2 44 37	63 22 17 13 23	17 14 6 6 1	4 4 2 2 8	39 57 54 34 218	64 79 54 34 39	205 219 197 292 81	1 1 1 1 1	2 1 3 3 3	10 2 8 5 3	10 2 8 5 3	41 15 20 21 16	49 52 67 48 55	16 10 15 9 12	1 1 1 1 1	115 11 92 114 336	253 21 265 186 1,067	538 129 467 437 2,181
Totals,		8	5	18	262	119	112	42	8	218	393	1,111	1	8	30	120	24	62	1	336	1,607	2,181	

G. B. Markle & Co.	2	6	1	3 2	99	30	1	291	33	840	1	1	18	20	49	51	9	122	281	1,111
Jeddo No. 4 and Ellevale,	1	2	3	177	179	2	5	35	19	40	1	1	9	21	47	30	9	38	114	53
Highland No. 3,	1	2	3	114	82	54	5	63	7	372	1	1	9	16	32	20	8	76	163	2,368
Highland No. 2,	4	10	4	623	209	191	15	387	9	1,765	3	3	36	57	128	101	26	304	658	2,368
Totals,																				
Lehigh Valley Coal Co.																				
Hazleton No. 1,	1	2	4	216	53	24	5	.....	114	40	1	1	15	8	40	7	3	175	189	115
Hazleton shaft,	2	1	4	405	211	43	7	.....	159	88	.....	1	26	24	36	13	3	271	304	1,211
Spring Brook,	1	1	1	71	61	8	7	.....	19	19	.....	1	1	24	31	7	2	166	185	2,34
Totals,	5	4	9	62	328	75	19	.....	32	1,484	1	3	66	56	106	27	8	472	738	2,222
Estate of A. S. Van Winkle.																				
Coleraine and Evans,	1	4	1	153	155	30	2	38	2	33	1	1	22	42	37	15	8	234	30	733
Milnesville,	1	3	.....	69	63	12	5	72	.....	227	.....	1	11	25	44	3	5	142	202	455
Totals,	2	7	1	222	218	42	4	12	110	2	620	1	2	33	67	81	13	376	592	1,212
Calvin Pardee & Co.																				
Harwood,	1	6	2	170	129	35	11	59	.....	422	1	3	13	22	28	30	4	231	32	751
Pardee Bros. & Co.,																				
Lattimer,	1	9	1	82	.....	34	3	25	177	331	1	12	38	40	30	21	6	287	455	774
Upper Lehigh Coal Co.																				
Upper Lehigh colliery,	2	3	.....	98	98	24	6	18	.....	271	1	3	14	37	62	35	7	187	345	616
C. M. Bodson & Co.																				
Beaver Brook,	1	2	2	75	80	24	4	10	18	226	1	1	14	18	27	41	4	78	184	419
John S. Wentz & Co.																				
Hazle Brook,	2	1	2	86	32	27	9	31	28	225	1	3	6	17	14	45	3	69	158	383
M. S. Kemmerer & Co.																				
Sandy Run,	2	.....	44	40	10	2	2	9	.....	110	1	1	5	20	23	36	2	28	115	225
W. R. McTurk & Co.																				
Star washery,																				
Black Creek Coal Co.																				
Rowe colliery,	1	.....	6	8	4	1	.....	.....	.....	20	1	1	1	1	4	3	.....	5	17	35
Harbough colliery,	1	.....	15	18	2	.....	.....	.....	.....	36	.....	1	4	2	1	1	.....	27	36	72
Totals,	2	.....	21	26	6	1	.....	.....	.....	56	1	2	5	3	5	4	.....	32	51	107
Thos R. Reese & Son.																				
Bushy Island,	1	.....	2	3	1	.....	.....	.....	.....	7	1	.....	1	1	.....	1	1	.....	4	11

Recapitulation.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.										Grand total, inside and outside.
		Mine foremen.	Assistant mine foremen.	Fire bosses and assistants.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	Pumpmen.	Company men.	All other employes.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers (boys).	State pickers (men).	Book-keepers and clerks.	All other employes.	Total outside.	
A. Pardee & Co.,	Luzerne, ..	4	9	2	328	184	72	40	13	19	58	728	...	1	38	38	46	30	3	290	336	1,062
Coke Bros. & Co., Inc.,	Luzerne, ..	3	4	4	49	46	92	37	36	2	217	900	1	4	30	107	103	49	17	617	96	1,806
Lehigh Coal and Navigation Co.,	Carbon, ..	8	5	18	26	119	112	41	8	218	351	1,114	1	1	30	120	291	62	1	526	1,057	2,181
Q. B. Mark & Co.,	Luzerne, ..	1	1	1	5	3	11	50	15	3	39	1,106	3	5	36	174	128	31	26	394	758	1,864
Lehigh Valley Coal Co.,	Luzerne, ..	4	7	9	6	218	42	20	12	38	363	1,476	1	5	36	174	128	31	26	394	758	2,232
Easton & S. Van Winkle,	Luzerne, ..	2	7	1	222	218	42	20	12	110	2	1,620	...	5	33	67	81	15	17	372	732	1,752
Clayton Pardee & Co.,	Luzerne, ..	1	6	2	176	129	32	6	11	5	...	429	1	13	13	92	38	20	4	331	372	1,201
Pardee Bros. & Co.,	Luzerne, ..	1	9	1	182	98	34	7	3	25	177	379	...	12	38	40	30	21	6	287	437	1,215
C. M. Ledson & Co.,	Luzerne, ..	1	3	...	98	34	34	12	6	18	177	271	...	3	14	37	62	35	7	187	345	616
John S. Westz & Co.,	Luzerne, ..	1	3	2	75	80	24	10	4	10	18	226	1	1	14	17	27	41	4	78	184	410
M. S. Kemmerer & Co.,	Luzerne, ..	2	1	2	86	32	27	7	9	31	28	225	1	3	6	17	14	45	3	69	178	383
W. R. McTurk & Co.,	Carbon, ..	2	...	...	44	40	10	3	2	9	...	110	1	1	5	20	27	36	2	28	115	296
Black Creek Coal Co.,	Luzerne, ..	2	...	...	21	26	6	1	...	...	...	56	1	1	4	4	70	7	1	32	88	176
Thos. R. Reese & Son,	Luzerne, ..	1	...	...	2	3	1	...	...	...	...	7	...	...	5	3	5	4	...	51	51	107
Totals,		40	57	45	3,144	1,663	755	241	158	890	1,212	8,237	10	47	361	607	1,015	499	56	3,452	6,127	14,362

TABLE III - Continued.

Names of Operators and Collieries.	County.	Number of Days Worked Each Month in Breaker.												
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
A. Pardee & Co.,	Luzerne,	24	22.8	15.7	24.8	9					7.2	9	21.8	123.2
Coxe Bros. & Co., Inc.	Luzerne,	21.2	19	15.3	29.5	7.7					7.2	8	1	114.5
Lehigh Coal and Navigation Co.,	Carbon,	21.6	21.8	19.3	23	8.5					6.	22.3	21.6	127.7
G. E. Markle & Co.,	Luzerne,	19.6	17.7	14.6	19	6.7						8.6	19.7	116.5
Lehigh Valley Coal Co.,	Luzerne,	14.3	19	17.1	32	8.2		8.3	5		8.4	22.4	23.2	133.5
Estate of A. S. Van Winkle,	Luzerne,	12.7	20.5	12.9	32.2	7.2					6.9	24.6	21.3	107.8
Calvin Pardee & Co.,	Luzerne,	18.7	22.7	16.1	32.8	7.2					7.9	25	20.5	121.1
Carline Bros. & Co.,	Luzerne,	25	22.8	20.1	25	8.8					9	25.6	21.3	127.7
Upper Lehigh Coal Co.,	Luzerne,	21.1	20.5	20.4	18	7.1					6.6	23.1	20.4	141.6
C. M. D. Smith & Co.,	Luzerne,	21.4	18.1	16.1	18.9	6.6					2.9	19.1	16.4	123.3
John S. Wenzel & Co.,	Luzerne,	19.5	17.9	11	3.4							21.1	15.6	123.6
M. S. Kemmerer & Co.,	Luzerne,	19.1	18.7	13.5	15.8	6.3						23.8	23	73.6
W. R. McTurk & Co.,	Carbon,	22.9	16.6	15.7	22.1	8					6.2	24	24	116.3
Black Creek Coal Co.,	Luzerne,	24	21.5	22.5	25	7						23.4	25	155
Thomas R. Reese & Son,	Luzerne,	25	24	24	26	21	25	24	20	27		25	26	274

TABLE IV—List of fatal accidents that occurred in and about the mines of the Fifth Anthracite District for the year ending December 31, 1902.

Date of accident	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan. 9	Geo. Gooreycek,	Greek,	Laborer, ..	36	M.	1	2	Lansford No. 4,	Carbon..	Killed by returning to what he supposed to be a missed shot.
18	Dennis Minkist,	Hungarian, ..	Miner,	40	M.	1	4	Highland No. 2,	Luzerne, ..	Killed by returning to what he supposed to be a missed shot.
18	Jno. Nerminski,	Polish,	Miner,	38	M.	1	1	Harwood,	Luzerne, ..	Killed by fall of coal while examining after a shot.
21	John Brennan,	American,	Patcher, ..	17	S.	.....	.....	Jeddo No. 4,	Luzerne, ..	Killed; head crushed while making a fly-buck.
Feb. 7	Steve Balash,	Slavonic,	Laborer, ..	24	M.	1	.....	Hazle Brook,	Luzerne, ..	Fatally injured; caught between railroad cars on siding to breaker.
8	William Krommas,	American,	Miner,	49	M.	1	2	Upper Lehigh,	Luzerne, ..	Killed in a breast by fall of coal.
10	Lucas Maestrelli,	Austrian,	Laborer, ..	40	M.	1	3	Derringer,	Luzerne, ..	Killed; struck by an empty car sent down slope.
11	Dan'l Fretzinger,	American,	Driver,	21	S.	.....	.....	Milnesville,	Luzerne, ..	Fatally injured; squeezed between mine cars and sprag on gangway. Died at Hazlet n Hospital nine days later.
March 12	John Wall,	American,	Driver,	17	S.	.....	.....	Lansford shaft No. 4,	Carbon..	Killed by machinery in breaker.
19	John Gambosh,	Slavonic,	Hitcher, ..	27	M.	1	1	Nesquehoning shaft,	Carbon..	Fatally injured; kicked by mule; died while on his way home.
24	Thos. Cumerford,	Irish,	Miner,	55	M.	1	3	Hazle Brook,	Luzerne, ..	Drowned by falling from platform and rolling down slope into water.
31	Chas. Broderick,	American,	Laborer, ..	21	S.	.....	.....	Sandy Brook,	Luzerne, ..	Fatally injured; squeezed between mine cars and timber.
31	Jno. Thomas James,	English,	Repairman, ..	69	M.	1	.....	Stockton,	Luzerne, ..	Fatally killed by fall of rock.
April 8	Henry Bertram,	American,	Miner,	39	M.	1	6	Beaver Meadow,	Carbon..	Fatally injured by a fall of coal while bearing it down.
22	John Koyout,	Polish,	Miner,	42	M.	1	5	Ebervale,	Luzerne, ..	Killed by a rush of coal and mud in a cut to
May 3	Andro Nowatnd,	Hungarian, ..	Miner,	47	M.	1	5	Harwood,	Luzerne, ..	Fatally injured by fall of coal while robbing pillars.

8	Peter Fererle,	Tyrolean,	Slate picker,	16	S.	.....	Derringer,	Luzerne,	Killed by machinery on the breaker.
29	Wm. Davis,	American,	Sta. eng., ...	35	S.	.....	Drifton,	Luzerne,	Fatally injured under slipped off the jack
29	Allen Watson,	Scotch,	Pumpman, ..	57	M.	.....	Lattimer,	Luzerne,	Working against a wall.
3	James Powell,	Italian,	Loader,	32	M.	1 2	Lattimer,	Luzerne,	Killed instantly by a runaway car on a
								Luzerne,	slope.
7	Andro Banko,	Hungarian, ...	Hitcher,	19	S.	.....	Coleraine,	Luzerne,	Kill d: head caught between two strip-
12	Thos. Conlin,	Irish,	Miner,	65	W.	.....	Hazleton No. 1, ...	Luzerne,	ping cars while attempting to make
29	Fred. Burgraft,	American,	Patcher,	16	S.	.....	Hazleton shaft,	Luzerne,	flyng coupling.
									Killed head caught between mine cars
									in attempt to make a flyng coupling.
									Found dead in breast from what was sup-
									posed to be natural causes.
									Instantly killed by being run over by loco-
									otive.
3	Elmer Karchner,	American,	Carpenter, ...	32	M.	1	Cranberry No. 4,	Luzerne,	Fatally injured by a runaway truck left
3	August Strack,	American,	Carpenter, ...	19	S.	.....	Cranberry No. 4,	Luzerne,	{ near the top. These two men were
									{ riding outside of car.

TABLE V.—List of non-fatal accidents that occurred in and about the mines of the Fifth Anthracite District for the year ending December 31, 1902.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan.								
9	Mike Redand,	Polish,	Miner,	36	M	Ebervale No. 1,	Luzerne,	Leg fractured by fall of clod on gang-
15	John Gantz,	American,	Slate picker,	33	3	Hazleton No. 1,	Luzerne,	Skull fractured by falling from a board-
20	Mike Bada,	Hungarian,	Loader,	22	2	Beaver Meadow,	Carbon,	Walk, outside.
21	Mike Beust,	Hungarian,	Miner,	46	M	Beaver Brook,	Luzerne,	Arm fractured by falling from a bridge,
23	Steve Nordok,	Slovak,	Laborer,	28	M	Hazleton No. 3 stripping,	Luzerne,	outside.
27	Leo Belles,	American,	Patcher,	29	2	Highland No. 5,	Luzerne,	Leg fractured by fall of clod in face of
28	James Swampy,	Irish,	Hitcher,	39	M	Upper Lehigh,	Luzerne,	breast.
28	Frank Banum,	Italian,	Laborer,	37	M	Dri ton No. 2,	Luzerne,	Skull fractured; struck by a rock on
Feb.								stripping.
1	William M. Shea,	American,	Top man,	2	2	Treacow No. 16,	Carbon,	Foot crushed by mine cars on gangway
3	Charles Bayer,	American,	Patcher,	17	2	Lattimer,	Luzerne,	Foot injured by mine car, outside.
6	John Greshin,	Slovak,	Laborer,	4	M	Jeddo No. 4,	Luzerne,	Arm fractured by being struck by
7	Angelo Mark,	Italian,	Laborer,	4	2	Coleraine,	Carbon,	timber.
7	Mike Dominick,	Italian,	Laborer,	33	2	Coleraine,	Carbon,	Leg, injured; squeezed between mine
15	Peder Baehicko,	Italian,	Bottom man,	22	M	Nesquehoning,	Carbon,	cars, outside; squeezed between cars,
20	Jamard Lamanda,	Italian,	Laborer,	1	M	Harwood,	Luzerne,	outside; squeezed between loose
27	Steve Torrick,	Hungarian,	Laborer,	18	2	Beaver Brook,	Luzerne,	Ribs fractured; squeezed between loose
Mar								rock and car inside.
4	Reuben Kresge,	American,	Engineer,	20	M	Harleigh,	Luzerne,	Head cut; struck by a piece of frozen
6	Joseph Wuttig,	Slovak,	Slate picker,	16	2	Cranberry,	Luzerne,	clay from shaft.
								Knee fractured; struck by a piece of clay
								which fell from edge of bank.
								Collar bone fractured; squeezed between
								car and gangway timber.
								Seriously injured; struck by a piece of
								frozen material on culm bank.
								Leg fractured by fall of clod at face of
								breast.
								Strained by steam from blow-off pipe on
								shaft.
								Arm fractured by machinery in breaker.

	Thomas Foley,	Polish,	Driver,	18	S.	East Crystal Ridge,	Luzerne,	
20	James O'Donnell,	Irish,	Miner,	56	M	Jeddo No. 4,	Luzerne,	Foot crushed; two toes cut off; run over by truck, outside.
April	19 John Gallagher,	Irish,	Miner,	45	M	Eckley No. 16,	Luzerne,	Injured by premature blast, due to cutting squib.
22	Joe Maestuski,	Hungarian,	Miner,	55	M	Ebervale,	Luzerne,	Leg fractured; struck by lump of coal.
22	Steve Onieskie,	Hungarian,	Miner,	55	M	Beaver Brook,	Luzerne,	Collar broken by fall of top rock.
May	1 Fatsio Rosario,	Italian,	Driver,	29	S.	Lattimer,	Luzerne,	Leg fractured while crossing between cars at bottom of slope.
Nov.	18 Mike Oranish,	Hungarian,	Stripping miner,	33	M	Harwood,	Luzerne,	Foot injured while attempting to jump on moving mine car, outside.
								While spawging a hole on stripping with fuse and dynamite, sparks flew from standing close by; the powder exploded, burning him severely.
20	Paul Giot,	Hungarian,	Miner,	35	M	Harwood,	Luzerne,	Right arm fractured by fall of clod near face of breast.
20	John Morinko,	Hungarian,	Miner,	44	....	Cranberry,	Luzerne,	Arm fractured; went back to what he supposed to be a missed shot.
Dec.	28 Joe Vausavish,	Polish,	Miner,	58	M	Harwood,	Luzerne,	Injured by fall of heavy coal.
2	Vete Rozella,	Italian,	Miner,	36	S.	Lattimer,	Luzerne,	Arm broken by fall of coal.
9	William Homshick,	Polish,	Miner,	36	S.	Cranberry,	Luzerne,	Leg fractured by piece of coal falling while he was barring it down.
11	Louis Agnosta,	Italian,	Laborer,	38	S.	Lattimer stripping,	Luzerne,	Leg fractured by a piece of track which he was striking with bars flying back and striking him.
13	Thomas Parry,	American,	Door boy,	17	S.	Harwood,	Luzerne,	Leg fractured by falling down an abandoned breast.
13	Louis Sherman,	American,	Driver,	23	S.	Gowan,	Luzerne,	Left arm broken; fell while spawging.
19	Wilton Jones,	American,	Miner,	19	M	Cranberry,	Luzerne,	Struck in forehead by a piece of coal.
20	James Quinn,	Irish,	Miner,	28	S.	Highland No. 2,	Luzerne,	Two small fingers of right hand crushed by a small body of fire damp which had gathered in his breast.



Sixth Anthracite District.

SCHUYLKILL COUNTY.

Shenandoah, Pa., March 30, 1903.

Hon. James W. Latta, Secretary of Internal Affairs, Harrisburg,
Pa.

Sir: I have the honor of herewith presenting my annual report as Inspector of Mines for the Sixth Anthracite Coal District for the year ending December, 1902.

The forms and tables furnished me by Mr. James E. Roderick, Chief of the Bureau of Mines, gives all the statistical information in connection with the district.

Yours respectfully,

WILLIAM STEIN,
Mine Inspector.

SUMMARY OF STATISTICS FOR 1902.

Number of mines in district,	37
Number of mines in operation during 1902,	35
Number of tons of coal produced,	4,366,827
Number of tons shipped to market,	3,611,218
Number of tons sold at mines to local trade,	68,252
Number of tons consumed at mines in generating steam and heat,	687,357
Number of persons employed inside the mines,	12,253
Number of persons employed outside,	8,605
Number of fatal accidents inside the mines,	40
Number of tons produced for each fatal accident in- side,	109,170
Number of persons employed per fatal accident in- side,	306
Number of fatal accidents outside,	12
Number of persons employed per fatal accident out- side,	717

Number of wives made widows by fatal accidents, . .	28
Number of children orphaned by fatal accidents, . . .	52
Number of non-fatal accidents inside of mines,	55
Number of persons employed per non-fatal accident inside,	224
Number of non-fatal accidents outside,	11
Number of persons employed per non-fatal accident outside,	782
Number of steam locomotives used inside,	1
Number of compressed air locomotives used inside, .	11
Number of fans used for ventilation,	58
Number of gaseous mines in operation during 1902, .	29
Number of non-gaseous mines in operation during 1902,	6
Number of new mines opened in 1902,	1
Number of old mines abandoned during 1902,	2

A. Production of Coal During the Year 1902.

Names of Companies.	Tons.
Philadelphia and Reading Coal and Iron Company, . .	2,538,596
Lehigh Valley Coal Company,	432,955
Lehigh and Wilkes-Barre Coal Company,	292,219
Mill Creek Coal Company,	276,938
Lentz & Co.,	184,989
Lawrence Coal Co.,	21,341
Susquehanna Coal Company,	83,522
Cambridge Coal Company,	39,386
Coxe Bros. & Co., Incorporated,	138,550
Silver Creek Coal Company,	63,317
Thomas Coal Co.,	3,268
M. A. Gerber & S. A. Seaman,	9,817
W. R. McTurk,	28,028
North American Coal Company,	108,621
Stoddart Coal Co.,	23,548
Carson Coal Co.,	28,400
Brookwood Coal Company,	39,588
Raven Run Coal Company,	53,744
Total,	4,366,827

B. Showing the number of fatal and non-fatal accidents inside and outside the mines; number of tons of coal produced per fatal and non-fatal accident inside the mines; number of persons employed inside and outside; and the number employed inside and outside for every fatal and non-fatal accident for each company during 1902.

Names of Companies.	Number of lives lost inside.	Number of lives lost outside.	Total number of lives lost.	Number severely injured inside.	Number severely injured outside.	Total number severely injured.	Tons of coal produced per each life lost inside.	Tons of coal produced per serious injury inside.	Number employees inside of mines.	Number of employees outside of mines.	Total number employed.	Number of employees inside for each life lost.	Number of employees inside for each severe injury.	Number of employees outside for each life lost.	Number of employees outside for each severe injury.
Philadelphia and Reading Coal and Iron Co.,	25	4	29	27	7	40	104,543	76,927	7,892	5,185	12,678	315	259	1,266	749
Lehigh Valley Coal Co.,	3	4	7	8	8	8	141,248	54,124	1,995	873	1,670	32	124	28	165
Lehigh and Wilkes-Barre Coal Co.,	1	1	2	1	3	11	292,219	36,527	1,113	497	1,809	1,113	139	...	...
M H Coal Co.,	1	1	2	1	1	1	26,978	26,978	432	287	758	133	433	...	...
Lentz & Co.,	4	4	8	1	1	1	36,247	184,789	555	254	849	138	555	...	...
Lawrence Coal Co.,	1	1	2	1	1	2	33,222	41,761	250	135	425	42	171	...	...
Susquehanna Coal Co.,	1	1	2	1	1	2	112	212	112	212	574	42	171	...	...
Cambridge Coal Co.,	1	1	2	1	1	2	14	14	14	14	14	14	14	...	...
Saxe Bros. & Co., Inc.,	1	1	2	1	1	2	18,000	18,000	200	141	291	200	107	...	...
Silver Brook Coal Co.,	1	1	2	1	1	2	51,678	63,317	154	284	438	67	131	281	...
Thompson Coal Co.,	1	1	2	1	1	2	...	...	8	30	38	...	...	...	...
W. R. McDermott & S. A. Staman,	1	1	2	1	1	2	36	41	36	41	77	...	...	...	...
North American Coal Co.,	1	1	2	1	1	2	63	110	63	110	173	...	...	...	...
Stoddard Coal Co.,	1	1	2	1	1	2	...	...	...	58	58	...	...	...	...
Carson Coal Co.,	1	1	2	1	1	2	57	57	57	57	137	...	...	...	...
Brookwood Coal Co.,	1	1	2	1	1	2	137	137	137	137	137	...	...	...	...
Raven Run Coal Co.,	1	1	2	1	1	2	25	25	25	25	30	...	...	...	...
Totals and averages,	40	12	52	55	11	66	109,177	79,267	12,257	6,165	20,838	306	223	717	775

D. Classification of Non-fatal Accidents for the Year 1902.

	Inside of Mines.										Outside of Mines.						Grand total.
	By Falls of			By Falling Into							Total inside.						Total outside.
	Coal.	State.	Roof.	By mine cars.	By explosion of gas.	Smothered by gas.	Powder and dynamite.	By blasts, etc.	Shafts.	Slopes.	Manways, breasts, etc.	(Pushed at batteries.	By mules.	Suffocated by coal, etc.	Miscellaneous causes.	Total inside.	
January,	2	2	.....	.....	2	.....	1	.....	.....	.....	.....	.....	.....	.....	2	9	11
February,	2	.....	.....	.....	1	.....	.....	.....	.....	1	1	.....	.....	.....	.....	7	10
March,	3	.....	.....	.....	6	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	16	10
April,	2	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	10
May, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
June, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
July, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
August, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
September,	4	2	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	10	10
October,	2	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	12
November, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
December, .....	.....	.....	.....	1	11	.....	7	.....	.....	1	1	.....	1	.....	14	65	6
Totals,	15	4	.....	1	11	.....	7	.....	.....	1	1	.....	1	.....	14	65	66

G. Nationality of Employees Killed or Fatally Injured Inside and Outside the Mines During 1902.

	Americans.	English.	Welsh.	Irish.	Germans.	Poles.	Hungarians.	Slovs.	Lithuanians.	Austrians.	Totals.
January,	4	.....	1	.....	.....	2	2	1	1	.....	11
February,	3	1	.....	.....	.....	4	.....	.....	1	1	10
March, .....	.....	.....	.....	1	.....	.....	1	.....	.....	.....	2
April,	1	1	.....	2	.....	2	.....	.....	.....	.....	6
May,	2	.....	.....	.....	.....	1	.....	1	.....	.....	4
October,	1	1	.....	.....	.....	.....	.....	.....	2	.....	4
November, .....	.....	.....	.....	1	1	.....	.....	.....	.....	1	10
December, .....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	3
Total,	11	3	1	4	1	17	3	2	8	2	52

H. Nationality of Employees Severely Injured Inside and Outside the Mines During 1902.

	Americans.	English.	Welsh.	Scotch.	Irish.	Germans.	Poles.	Hungarians.	Italians.	Lithuanians.	Russians.	Totals.
January,	3	.....	.....	.....	.....	.....	5	1	1	1	.....	11
February,	1	.....	.....	1	1	1	6	.....	.....	.....	.....	10
March,	2	1	.....	.....	1	.....	3	2	.....	.....	1	10
April,	3	1	2	.....	1	.....	4	1	.....	.....	4	16
October,	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	2
November,	1	1	.....	.....	1	.....	1	.....	.....	.....	1	12
December, .....	.....	.....	.....	.....	1	.....	1	.....	.....	2	1	6
Total,	11	4	2	1	5	1	27	4	1	3	7	66

TABLE 1—Continued

Names of Operators and Mines	Kind of opening.	Kind of opening.	Gasous or non-gaseous.	Method of ventilation.	Provision and width of fan In feet.	Water gauge developed in Inches.	Name of fan.	Power used.	Number of air splits of air currents.	Number of cubic feet of air per minute entering the mine at inlet.	Total quantity of air per minute circulating in all the splits in cubic feet.	Number of cubic feet per minute passing out at out- let.	Number of persons employed inside.	Average number of cubic feet per minute provided for each person.	
Tahoe Valley Coal Co.															
Tunnel No. 1.	7 ft.	Gasous.	Fan.	21 x 4	7	1.3	Guibal.	Steam.	6	362,475	162,715	174,335	200	20	
Tunnel No. 2.	7 ft.	Gasous.	Fan.	16 x 4	4	1.3	Guibal.	Steam.	6	13,929	53,910	61,112	237	100	
Tunnel No. 3.	7 ft.	Gasous.	Fan.	15 x 4	6	1.3	Guibal.	Steam.	6	91,000	91,000	100,000	222	130	
West Shoshone ad.	7 ft.	Gasous.	Fan.	18 x 6	6	1	Guibal.	Steam.	6	42,000	42,000	42,000	155	154	
Loblish and Wilkes-Barre Coal Co.															
Packer No. 1.	7 ft.	Gasous.	Fan.	12 x 4	4	5	Guibal.	Steam.	6	91,000	91,000	100,000	222	130	
Packer No. 2.	7 ft.	Gasous.	Fan.	1 x 5	5	1.5	Guibal.	Steam.	6	42,000	42,000	42,000	155	154	
Packer No. 3.	7 ft.	Gasous.	Fan.	20 x 8	6	1.1	Guibal.	Steam.	4	68,110	50,110	57,711	87	315	
Packer No. 4.	7 ft.	Gasous.	Fan.	16 x 6	6	1.1	Guibal.	Steam.	7	81,200	70,000	82,100	341	213	
Packer No. 5.	7 ft.	Gasous.	Fan.	16 x 4	4	1.1	Guibal.	Steam.	7	81,200	70,000	82,100	341	213	
Packer No. 6.	7 ft.	Gasous.	Fan.	1 x 3 1/2	5 1/2	1.5	Guibal.	Steam.	7	81,200	70,000	82,100	341	213	
Loblish and Wilkes-Barre Coal Co.															
Antoniad No. 4.	7 ft.	Gasous.	Fan.	1 x 4	4	1.8	Guibal.	Steam.	6	120,000	120,000	170,000	273	225	
Honey Brook No. 1.	7 ft.	Non-gas.	Fan.	1 x 4	4	1	Guibal.	Steam.	6	81,240	81,240	86,210	48	180	
Green Mountain.	7 ft.	Non-gas.	Fan.	12 x 4	4	1	Guibal.	Steam.	6	59,500	59,500	63,460	117	325	
Mill Creek Coal Co.															
Vulcan.	7 ft.	Gasous.	Natural.	16 x 4	4	8	Guibal.	Steam.	6	73,069	73,069	77,577	241	370	
Buck Mountain															
	7 ft.	Gasous.	Fan.	16 x 4	4	1.3	Guibal.	Steam.	6	69,824	69,820	91,318	232	303	
Lantz & Co.															
Park No. 2.	7 ft.	Gasous.	Fan.	15 x 4 1/2	4 1/2	1	Steeh.	Steam.	6	75,100	55,890	76,210	241	22	
Park No. 3.	7 ft.	Gasous.	Fan.	12 x 1	1	1.8	Steeh.	Steam.	6	61,756	61,756	75,329	312	198	
Lawrence Coal Co.															
Lawrence	Slope	Gasous.	Fan.	15 x 4	4	1 1/2	Guibal.	Steam.	8	70,560	56,500	56,718	230	218	

Title.

Susquehanna Coal Co.										
William Penn.	Shaft, Drift, ..	Gaseous, Gaseous, ..	Fan,	{ 18 x 7 18 x 7 12 x 3½	2.3 2.3 1	Guibal, Guibal, ..	Steam, Steam, ..	{ 5 4 2	{ 52,500 118,440 15,600	{ 312 654
Cambridge Coal Co.										
Cambridge,	Drift, ..	Non-gas, Non-gas, ..	Fan,	12 x 4	.4	Guibal,	Steam, ..	2	27,500	92
Cambridge,	Drift, ..	Non-gas, Non-gas, ..	Fan,	6 x 3	.3	Guibal,	Steam, ..	1	27,500	299
Ceco Bros. & Co., Inc.										
Onelda,	Slope, ..	Gaseous, Non-gas, ..	Fan,	2 11 x 13	1½	Pelzer,	Steam, ..	12	98,637	72
Onelda,	Slope, ..	Non-gas, ..	Natural Fan,	20 x 6	1	Guibal,	Steam, ..	10	21,000 46,150	87 132
Silver Brook Coal Co.										
Silver Brook,	Slope, ..	Non-gas, ..	Fan,	{ 18 x 5 14 x 4	.9 .7	Vulcan,	Steam, ..	2	32,120	134
Thomas Coal Co.										
Kehley's Run,	Slope, ..	Non-gas, ..	Fan,	16 x 5	1½	Guibal,	Steam, ..			
M. A. Gerber & S. A. Staman,										
Furnace,	Slope, ..	Non-gas, ..	Fan,	10 x 4	.4	Guibal,	Steam, ..	2	16,000	36
R. W. McTurk,										
Girard,	Slope, ..	Gaseous, Non-gas, ..	Fan,	12 x 4	.8	Guibal,	Steam, ..	2	13,200	43
Brookwood Coal Co.										
Stanton,	Slope, ..	Non-gas, ..	Fan,	15 x 3 7	.5	Guibal,	Steam, ..	2	5,780	25

Side.

title.

TABLE 1.—Showing names of operators, railroads, etc., and location of collieries in the Sixth Anthracite District for the year 1902.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Phila. & Read Coal & Iron Co.	Schuylkill	R. C. Luther	Pottsville	John Veith	Pottsville	Phila. and Reading R. R.
Bear Run	Schuylkill	R. C. Luther	Pottsville	John Veith	Pottsville	Phila. and Reading R. R.
Easton Run	Schuylkill	R. C. Luther	Pottsville	John Veith	Pottsville	Phila. and Reading R. R.
Draper	Schuylkill	R. C. Luther	Pottsville	John Veith	Pottsville	Phila. and Reading R. R.
Elkington	Schuylkill	R. C. Luther	Pottsville	John Veith	Pottsville	Phila. and Reading R. R.
Chamaw	Schuylkill	R. C. Luther	Pottsville	John Veith	Pottsville	Phila. and Reading R. R.
Grand Mammoth	Schuylkill	R. C. Luther	Pottsville	John Veith	Pottsville	Phila. and Reading R. R.
Grand washer	Schuylkill	R. C. Luther	Pottsville	John Veith	Pottsville	Phila. and Reading R. R.
Clifton	Schuylkill	R. C. Luther	Pottsville	John Veith	Pottsville	Phila. and Reading R. R.
Hammond	Schuylkill	R. C. Luther	Pottsville	John Veith	Pottsville	Phila. and Reading R. R.
Indian Ridge	Schuylkill	R. C. Luther	Pottsville	John Veith	Pottsville	Phila. and Reading R. R.
Knokehooker	Schuylkill	R. C. Luther	Pottsville	John Veith	Pottsville	Phila. and Reading R. R.
Kennedy	Schuylkill	R. C. Luther	Pottsville	John Veith	Pottsville	Phila. and Reading R. R.
Marble City	Schuylkill	R. C. Luther	Pottsville	John Veith	Pottsville	Phila. and Reading R. R.
Marble Hill	Schuylkill	R. C. Luther	Pottsville	John Veith	Pottsville	Phila. and Reading R. R.
North Mahanoy	Schuylkill	R. C. Luther	Pottsville	John Veith	Pottsville	Phila. and Reading R. R.
St. Nicholas	Schuylkill	R. C. Luther	Pottsville	John Veith	Pottsville	Phila. and Reading R. R.
South	Schuylkill	R. C. Luther	Pottsville	John Veith	Pottsville	Phila. and Reading R. R.
Shepherd City	Schuylkill	R. C. Luther	Pottsville	John Veith	Pottsville	Phila. and Reading R. R.
Tonkey Run	Schuylkill	R. C. Luther	Pottsville	John Veith	Pottsville	Phila. and Reading R. R.
Tunnel Ridge	Schuylkill	R. C. Luther	Pottsville	John Veith	Pottsville	Phila. and Reading R. R.
West Shenandoah	Schuylkill	R. C. Luther	Pottsville	John Veith	Pottsville	Phila. and Reading R. R.
Lehigh Valley Coal Co.	Schuylkill	D. Warriner	Wilkes-Barre	R. S. Mercier	Centralia	Lehigh Valley Railroad.
Packer No. 2	Schuylkill	D. Warriner	Wilkes-Barre	R. S. Mercier	Centralia	Lehigh Valley Railroad.
Packer No. 3	Schuylkill	D. Warriner	Wilkes-Barre	R. S. Mercier	Centralia	Lehigh Valley Railroad.
Packer No. 4	Schuylkill	D. Warriner	Wilkes-Barre	R. S. Mercier	Centralia	Lehigh Valley Railroad.
Packer No. 5	Schuylkill	D. Warriner	Wilkes-Barre	R. S. Mercier	Centralia	Lehigh Valley Railroad.
Primrose	Schuylkill	D. Warriner	Wilkes-Barre	W. H. Davis	Hazleton	Lehigh Valley Railroad.
Lehigh & Wilkes-Barre Coal Co.	Schuylkill	W. J. Richards	Wilkes-Barre	Geo. H. Hadesty	Audenseld	Central R. R. of N. J.
Audenseld No. 4	Schuylkill	W. J. Richards	Wilkes-Barre	Geo. H. Hadesty	Audenseld	Central R. R. of N. J.
Honey Brook No. 3	Schuylkill	T. D. Jones	New Boston	J. Elmer Jones	New Boston	Lehigh Valley Railroad.
Mill Creek Coal Co.	Schuylkill	T. D. Jones	New Boston	J. Elmer Jones	New Boston	Lehigh Valley Railroad.
Puck Mountain	Schuylkill	William O. Lentz	Mauch Chunk	Edward Reese	Park Place	Lehigh Valley Railroad.
Lentz & Co.	Schuylkill	William O. Lentz	Mauch Chunk	Edward Reese	Park Place	Lehigh Valley Railroad.
Park No. 2	Schuylkill	William O. Lentz	Mauch Chunk	Edward Reese	Park Place	Lehigh Valley Railroad.

Lawrence Coal Co.	Schuylkill...	W. J. Miller.....	Frackville.....	W. J. Miller.....	Frackville.....	Phila. and Reading R. R.
Lawrence.....	Schuylkill...	Morris Williams...	Wilkes-Barre.....	E. A. Rhoads.....	Shaft, P. O.....	Pennsylvania Railroad.
Susquehanna Coal Co.	Schuylkill...	J. C. McGinnis...	Frackville.....	J. C. McGinnis.....	Frackville.....	Phila. and Reading R. R.
William Penn.....	Schuylkill...	.....	.....	Luther C. Smith...	Drifton.....	Del., Sus. and Schuylkill.
Cambridge Coal Co.	Schuylkill...	.....	.....	James Long.....	Silver Brook.....	Lehigh Valley Railroad.
Coxe Bros. & Co., Inc.	Schuylkill...	.....	.....	Thomas Baird.....	Shenandoah.....	Phila. and Reading R. R.
Onelda Nos. 1, 2 and 3.	Schuylkill...	Thomas Baird.....	Shenandoah.....	Mahlon A. Gerber...	Tamaqua.....	Phila. and Reading R. R.
Silver Brook Coal Co.	Schuylkill...	Mahlon A. Gerber...	Tamaqua.....	W. J. Heiser.....	Hazleton.....	Phila. and Reading R. R.
Thomas Coal Co.	Schuylkill...	W. R. McTurk...	Philadelphia, 22 ^d Walnut Street.	W. J. Heiser.....	Hazleton.....	Phila. and Reading R. R.
Kehley's Run.....	Schuylkill...	W. R. McTurk...	.....	James F. Sharkey...	Shaft P. O.....	Phila. and Reading R. R.
M. A. Gerber & S. A. Stannan.	Schuylkill...	H. W. Saums.....	Wilkes-Barre.....	P. H. McGee.....	Minersville.....	Phila. and Reading R. R.
Furnace.....	Schuylkill...	.....	.....	.....	.....	Central R. R. of N. J.
W. R. McTurk.	Schuylkill...	.....	.....	William Spedel.....	Frackville.....	Phila. and Reading R. R.
Girard colliery.....	Schuylkill...	.....	.....	William Spedel.....	Frackville.....	Phila. and Reading R. R.
Girardville washery.....	Schuylkill...	.....	.....	Godfrey Landerman.	Minersville.....	Phila. and Reading R. R.
North American Coal Co.	Schuylkill...	.....	.....	.....	.....	.....
Schuylkill No. 1 washery.....	Schuylkill...	.....	.....	.....	.....	.....
Stoddard Coal Co.	Schuylkill...	.....	.....	.....	.....	.....
Stoddard washery.....	Schuylkill...	.....	.....	.....	.....	.....
Carson Coal Co.	Schuylkill...	H. E. Kissinger...	Plymouth.....	.....	.....	.....
Carson washery.....	Schuylkill...	Henry Meyers.....	Minersville.....	.....	.....	.....
Brookwood Coal Co.	Schuylkill...	Henry Meyers.....	Minersville.....	.....	.....	.....
Stanton colliery.....	Schuylkill...	.....	.....	.....	.....	.....
Brookwood washery.....	Schuylkill...	.....	.....	.....	.....	.....
Raven Run Coal Co.	Schuylkill...	.....	.....	.....	.....	.....
Raven Run washery.....	Schuylkill...	.....	.....	.....	.....	.....

Packer No. 1	96,928	13,222	1,698	105,868	49.5	253	3	3	1,720	11,974	91
Primrose, ..	166,653	6,580	2,707	118,220	137.2	561	3	3	2,956	10,571	75
Totals, ..	350,143	77,659	5,143	422,655	79	1,889	8	11	7,086	30,332	236
Lehigh and Wilkes-Barre.											
Audenried No. 4, ..	106,877	19,492	2,265	131,634	117.2	750	...	7	2,692	18,827	57
Honey Brook No. 5, ..	139,827	29,758	...	160,585	122.9	785	1	5	1,720	41,330	47
Totals, ..	249,704	49,250	2,265	292,219	120	1,545	1	10	4,342	60,337	104
Mill Creek Coal Co.											
Vulcan, ..	133,164	12,452	...	145,646	132	382	...	...	3,886	2,750	35
Buck Mountain, ..	114,948	16,344	...	131,292	119	375	2	2	2,747	2,475	36
Totals, ..	248,112	28,836	...	276,938	125	757	2	2	6,633	5,225	71
Lentz & Co.											
Park No. 2, ..	165,682	18,394	912	184,689	116	814	4	1	3,969	7,900	99
Lawrence Coal Co.											
Lawrence, ..	12,298	8,406	547	21,341	55.9	425	...	...	30	30,000	41
Susquehanna Coal Co.											
Win. Penn.	63,298	19,028	1,196	82,522	57.75	554	1	2	2,590	8,221	63
Cambridge Coal Co.											
Cambridge, ..	35,236	2,112	2,028	39,286	125	141	2	...	975	3,700	10
Coke Bros. & Co., Inc.											
Onelda Nos. 1, 2 and 3, ..	95,368	41,127	2,065	138,550	112	505	2	1	2,274	7,577	67
Silver Brook Coal Co.											
Silver Brook, ..	57,382	5,000	935	63,317	106.5	415	3	1	545	8,400	32
Thomas Coal Co.											
Kehley Run, ..	655	2,115	548	3,298	...	38	...	...	...	...	18
M. A. Gerber & S. A. Seaman.											
Furnace, ..	7,717	2,100	...	9,817	76.5	77	...	...	150	1,900	6
W. R. McTurk.											
Glard colliery, ..	25,771	815	1,412	28,028	118.9	173	1	...	92	717	10
North American Coal Co.											
Schuylkill No. 1 washery, ..	103,448	5,126	47	108,621	159	98	...	1	...	...	2
Stoddart Coal Co.											
Stoddart washery, ..	21,908	1,580	...	23,548	79	57	1	...	...	...	2
Carson Coal Co.											
Carson washer, ..	27,400	1,006	...	28,400	114.4	57	...	...	...	...	8
Schuylkill, ..											

*Totals in this column are averages

TABLE II—Continued.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Brookwood Coal Co.	Schuylkill.	.....	.....	.....	.....	•	48	.....	.....	200	600	4
Stanton colliery		.....	.....	.....	.....	.....	36	.....	.....	.....	.....	2
Brookwood washery.		37,787	1,151	.....	28,908	166	.....	.....	.....	.....	.....	.....
Totals,		37,787	1,801	.....	29,588	166	84	.....	.....	200	600	6
Haven Run Coal Co.	Schuylkill.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Raven Run washery.		52,434	1,210	.....	53,714	172	30	.....	.....	.....	.....	.....
Grand totals,		3,611,218	687,357	68,252	4,206,827	*118	29,858	52	16	71,700	322,039	1,829

*Totals in this column are averages.

TABLE II—Continued.

Names of Operators and Collieries.	County.	Number of Boilers.			Locomotives.			Total horse power.	Number steam engines of all classes.	Total horse power.	Number pumps delivering water to surface.	Capacity in gallons per minute.	Quantity delivered to surface per minute—gallons.	Number electric dynamos.	Number air compressors.	
		Cylindrical.	Horse power.	Tubular.	Horse power.	Steam.	Air.									Electric.
Philadelphia and Reading Coal and Iron Co.,	Schuylkill.	128	4,650	226	25,269	32,139	13	8	293	43,739	65	65,951	47,450			
Lehigh Valley Coal Co.,	Schuylkill.	39	780	28	3,200	3,800	7	1	86	21,837	15	17,791	5,420			
Lehigh and Wilkes-Barre,	Schuylkill.	63	3,150	21	3,200	3,800	1	1	21	1,400	9	15,217	7,608			
Mill Creek Coal Co.,	Schuylkill.	52	2,960	4	850	3,810	2	2	37	2,910	7	7,500	2,600			
Lentz & Co.,	Schuylkill.	13	3,250	13	3,250	3,410	1	1	3	85	3	4,800	2,600			
Lawrence Coal Co.,	Schuylkill.	20	1,150	12	1,250	3,000	1	1	12	850	4	3,000	2,600			
Susquehanna Coal Co.,	Schuylkill.	12	1,250	12	1,250	1,250	1	1	19	1,585	4	3,000	2,600			
Cambridge Coal Co.,	Schuylkill.	2	50	2	250	2,300	1	1	4	120	1					
Shore Brook Coal Co.,	Schuylkill.	24	1,174	18	2,131	3,345	4	1	34	1,960	7	6,800	4,650			
Thomas Coal Co.,	Schuylkill.	8	1,250	8	1,250	1,750	2	1	10	730	6	5,250	5,250			
M. A. Gerhart & S. A. Seaman,	Schuylkill.	24	730	4	240	730	1	1	19	1,240	2	1,050	1,050			
W. R. McTurk,	Schuylkill.	4	60	4	240	300	1	1	8	120						
North American Coal Co.,	Schuylkill.	3	240	3	240	240	1	1	8	120						
Stoddard Coal Co.,	Schuylkill.	3	175	3	175	700	1	1	8	204						
Carson Coal Co.,	Schuylkill.	3	330	3	330	330	1	1	12	172						
Brookwood Coal Co.,	Schuylkill.	4	360	4	360	600	1	1	10	240						
Raven Run Coal Co.,	Schuylkill.	2	150	2	150	300	1	1	13	257						
Grand totals.		236	13,114	374	44,586	61,475	41	11	582	78,408	123	100,459	62,978	4	17	

Packer No. 4,	Schuylkill,	1	1	3	57	27	14	2	14	.....	57	135	.....	1	22	30	62	10	7	224	396	681
Packer No. 5,	Schuylkill,	1	1	1	44	78	5	2	.....	13	.....	34	.....	1	18	10	.....	.....	3	134	108	273
Primrose,	Schuylkill,	1	1	3	147	46	53	8	4	.....	93	341	.....	1	11	12	32	11	2	88	187	601
Totals, .....	.....	5	2	13	374	175	73	21	29	61	234	906	.....	5	54	78	94	21	14	587	873	1,849
Lehigh and Wilkes-Barre,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Autenreid No. 4,	Schuylkill,	1	2	2	166	168	24	13	8	109	37	539	.....	1	.....	26	77	12	2	114	222	782
Honey Brook No. 5,	Schuylkill,	1	2	1	124	96	17	7	4	80	251	583	.....	3	5	29	26	69	10	2	21	265
Totals, .....	.....	2	4	3	290	264	41	20	12	189	288	1,113	.....	3	6	29	52	116	22	4	135	497
Mill Creek Coal Co.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vulcan,	Schuylkill,	1	1	2	148	44	13	9	2	13	8	241	.....	1	1	8	20	35	44	2	31	142
Buck Mountain,	Schuylkill,	1	1	1	112	60	22	1	1	25	7	232	.....	1	8	25	48	32	3	26	143	376
Totals, .....	.....	2	2	3	260	104	35	10	4	38	15	473	.....	1	2	16	45	82	76	5	57	285
Lentz & Co.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Park No. 2,	Schuylkill,	2	2	2	228	146	45	3	12	24	81	555	.....	1	1	31	21	20	72	3	106	254
Lawrence Coal Co.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lawrence,	Schuylkill,	1	.....	2	79	65	12	13	8	10	40	239	.....	1	1	7	21	109	10	1	46	195
Susquehanna Coal Co.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wm. Penn,	Schuylkill,	1	.....	4	121	54	16	2	5	20	109	312	.....	1	1	22	24	50	13	5	96	212
Cambridge Coal Co.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cambridge,	Schuylkill,	1	2	.....	53	18	4	.....	.....	16	.....	94	.....	1	1	2	7	18	2	1	15	47
Coxe Bros. & Co., Inc.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Onelda Nos. 1, 2 and 3,	Schuylkill,	3	2	.....	158	18	25	12	10	9	54	291	.....	1	11	38	31	8	1	124	214	505
Silver Brook Coal Co.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Silver Brook,	Schuylkill,	1	1	.....	44	34	29	8	6	8	12	134	.....	1	3	10	24	40	90	2	110	281
Thomas Coal Co.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kehley Run,	Schuylkill,	.....	.....	.....	.....	.....	.....	.....	8	.....	.....	8	.....	1	1	1	6	.....	1	20	30	38
M. A. Gerber & S. A. Seaman,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Furnace,	Schuylkill,	1	.....	1	17	10	2	.....	.....	5	.....	36	.....	1	1	2	6	16	.....	14	41	77
W. R. McTurk,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grand colliery,	Schuylkill,	1	.....	1	32	18	3	1	.....	7	10	73	.....	1	1	9	6	19	.....	1	73	116
Grandville washery, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals, .....	.....	1	.....	1	32	18	3	1	.....	7	10	73	.....	1	1	9	6	19	.....	1	73	110
North American Coal Co.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Schuylkill No. 1 washery,	Schuylkill,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	1	10	6	6	1	72	98
Stoddart Coal Co.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stoddart washery,	Schuylkill,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	2	7	10	.....	1	35	57

TABLE IV.—List of fatal accidents that occurred in and about the mines of the Sixth Anthracite District for the year ending December 31, 1902.

Date of accident	Name of person	Nationality by birth	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and cause of Accident in Brief.
Jan	1 John Bernat,	Hungarian,	Bottom man, ..	28	M.	1	2	Onelda No. 1,	Schuylkill.	A descending gun-boat dragged him down the slope.
	2 Lewis Lindermuth, ..	American,	Carpenter,	45	M.	1	3	Maple Hill,	Schuylkill.	Was caught by a descending cage.
	10 John Vardie,	Hungarian,	Miner,	47	M.	1	1	Onelda,	Schuylkill.	Killed by fall of coal.
	11 John Schatz,	Slavonic,	Laborer,	36	M.	1	1	Silver Brook,	Schuylkill.	Fatally injured by a water boiler striking him on the side of the right head.
	12 John Williams,	Welsh,	Loader boss, ..	46	M.	1	3	Hammond,	Schuylkill.	Fatally injured by an explosion of gas.
	13 John Lachinsky,	Lithuanian,	Repairman,	41	M.	1	4	Maple Hill,	Schuylkill.	
	15 John McGuire,	American,	Top and miner, ..	27	M.	1	1	Maple Hill,	Schuylkill.	
	16 John Madles,	Pish,	Miner,	27	M.	1	1	Maple Hill,	Schuylkill.	
	17 William Knicks,	Polish,	Miner,	31	M.	1	1	Mahany City,	Schuylkill.	
	20 Frank Zimmers,	American,	Blacksmith, ..	30	M.	2	...	Mahany City,	Schuylkill.	Killed by fall of top slate.
	28 James Kain,	American,	Attd. to scraper line,	18	S.	...	...	St. Nicholas,	Schuylkill.	Killed while tamping a hole with dynamite. It exploded.
Feb	6 Michael Gray,	American,	Leader,	19	S.	...	...	Packer No. 4,	Schuylkill.	Fatally injured by having a rope roll on him, died same day.
	7 Frank Papco,	Austrian,	Laborer,	21	M.	1	...	Stoddart,	Schuylkill.	Fatally injured by being caught between a slope wall and cars; died March 3d.
	12 William Trunks,	American,	Laborer,	21	S.	...	...	Boston Run,	Schuylkill.	Was caught between buggy and dumper; died March 11.
	14 Mart Timewas,	Polish,	Miner,	20	M.	1	2	Maple Hill,	Schuylkill.	Killed by fall of rock.
	15 Andy Joun,	American,	Miner,	26	S.	...	...	Boston Run,	Schuylkill.	Fatally injured by being squeezed by cars; died March 20.
	16 Mart Timewas,	Polish,	Miner,	22	M.	1	2	Maple Hill,	Schuylkill.	Killed by fall of top rock.
	17 Mart Timewas,	Polish,	Laborer,	22	M.	1	...	Clifton,	Schuylkill.	Killed by being caught under timber.
	18 J. B. Davies,	English,	Miner,	26	M.	1	...	Park No. 2,	Schuylkill.	Killed by fall of coal.
	20 William Stacey,	Pish,	Miner,	25	S.	...	...	St. Nicholas,	Schuylkill.	Killed by fall of coal.
	28 Anthony Sockel,	Lithuanian,	Miner,	26	S.	...	...	Back Mountain, ..	Schuylkill.	Fatally injured; died the same day; piece of coal fell on him.
Mar	21 John Call,	Pish,	Miner,	40	M.	1	1	Silver Brook,	Schuylkill.	Killed by fall of rock.
	23 John Fether,	Hungarian,	Miner,	28	M.	1	2	Park No. 2,	Schuylkill.	Killed by fall of coal.
April	5 James E. man,	Pish,	Footman,	26	S.	...	...	Packer No. 4,	Schuylkill.	Killed by cars while crossing tracks.

7	Lewis Kuslowski,	Polish,	Laborer,	21	S.	.....	Maple Hill,	Schuylkill,	Fatally injured by premature blast; died same day.
12	Patrick Sharpe,	Irish,	Miner,	55	M.	.....	Silver Brook,	Schuylkill,	Killed by fall of coal.
14	Anthony Gilinski,	Polish,	Laborer,	22	S.	.....	Wm. Penn,	Schuylkill,	Fatally injured by a fall of coal; died April 18.
14	William Tempest,	English,	Fire boss,	28	M.	1	Tunnel Ridge,	Schuylkill	Killed by falling down manway.
28	Anthony Orme,	American,	Driver,	23	S.	.....	Turkey Run,	Schuylkill	Killed by falling under a wagon.
1	Mike Surco,	Slavonic,	Laborer,	37	M.	1	Honey Brook,	Schuylkill,	Killed by fall of coal.
5	Alex. Krines,	Polish,	Laborer,	24	S.	.....	Rock Mountain,	Schuylkill,	Killed by fall of top slate.
14	Thomas Kwak,	American,	Big runner,	25	S.	.....	Packer No. 4,	Schuylkill,	Killed by being caught in fly wheel.
14	John Michael,	Lithuanian,	Fireman,	23	S.	.....	Packer No. 5,	Schuylkill,	These men were killed by boiler explosion.
14	John Revich,	American,	Fireman,	34	S.	.....	Packer No. 5,	Schuylkill,	
14	Pat Kelly,	English,	Fireman,	37	S.	.....	Maple Hill,	Schuylkill,	
24	John Davis,	American,	Fan engineer,	57	W.	.....	Maple Hill,	Schuylkill,	Killed; he was found dead in the fan pit, fast in one of the blades.
24	Ralph Nattress,	American,	Miner,	44	W.	4	Girardville,	Schuylkill,	Fatally injured; fell down slope; died same day.
24	Ant. Mulshes,	Lithuanian,	Miner,	32	M.	.....	Shenandoah City,	Schuylkill,	Fatally burned by powder; died Nov. 2.
28	Paul Veroskie,	Lithuanian,	Miner,	30	M.	.....	Shenandoah City,	Schuylkill,	Killed by fall of coal.
7	John Grant,	Irish,	Miner,	50	S.	.....	Mahanoy City,	Schuylkill,	Killed by fall of slate.
7	Mart. Carbonile,	Polish,	Laborer,	25	S.	.....	Cambridge,	Schuylkill,	These two men were killed by fall of coal.
7	Enoch Perlewage,	Polish,	Laborer,	24	S.	.....	Cambridge,	Schuylkill,	
10	Joe Yokolons,	Polish,	Miner,	22	S.	.....	Maple Hill,	Schuylkill,	Killed by fall of coal.
22	Peter Verbinsky,	Polish,	Laborer,	25	S.	.....	Turkey Run,	Schuylkill,	Fatally injured by fall of rock; died Nov. 22.
24	Wm. Ashman,	German,	Miner,	45	M.	1	North Mahanoy,	Schuylkill,	Fatally injured by fall of coal; died Nov. 26.
24	Ant. Babunski,	Lithuanian,	Miner,	38	M.	1	Tunnel Ridge,	Schuylkill,	Killed by fall of coal.
27	Wm. Dauber,	Polish,	Miner,	40	M.	1	Primrose,	Schuylkill,	Killed by blast.
28	Wm. Sticktis,	Lithuanian,	Miner,	37	S.	.....	Park No. 3,	Schuylkill,	Killed by fall of coal.
17	August Yop,	Austrian,	Miner,	45	M.	1	Draper,	Schuylkill,	Killed by fall of coal.
2	John Zorbec,	Polish,	Laborer,	28	S.	.....	Knickerbocker,	Schuylkill,	Killed by fall of rock.
27	Charles Kankes,	Polish,	Miner,	33	M.	1	Knickerbocker,	Schuylkill,	Killed by fall of coal.
31	Frank Rickwan,	Polish,	Miner,	35	M.	1	Park No. 3,	Schuylkill,	Killed by fall of coal.

May

Oct.

Nov.

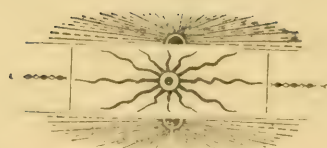
Dec.

TABLE V.—List of non-fatal accidents that occurred in and about the mines of the Sixth Anthracite District for the year ending December 31, 1902.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan.	4 John Paulbinski,	Polish.	Laborer,	28	S.	Packer No. 5,	Schuylkill,	Broken leg; a piece of coal fell on it.
	5 Wm. Gaudge,	American.	Miner,	31	M.	Boston Run,	Schuylkill,	Hands and face burned by gas in going up chute.
	6 James White,	Polish.	Miner,	21	M.	Boston Run,	Schuylkill,	Leg broken; while pushing cars on the tip.
	7 Joe Dilfsky,	Polish.	Platform man,	23	S.	Maple Hill,	Schuylkill,	Leg broken; while pushing cars on the tip.
	13 Raphael Giranda,	Italian.	Miner,	23	S.	Autenreid,	Schuylkill,	Leg of state discharging his spine.
	17 Velick Lumpkis,	Polish.	Laborer,	22	S.	Trimrose,	Schuylkill,	Injured by an explosion of dynamite.
	23 Peter Patrie,	Hungarian.	Driver,	25	S.	Draper Mountain,	Schuylkill,	Injured by falling under a loaded trip.
	24 Wm. Matthes,	Polish.	Laborer,	27	S.	Knickerbocker,	Schuylkill,	Injured; a piece of coal fell on him.
	24 Wm. Matthes,	Lithuanian.	Miner,	22	M.	Knickerbocker,	Schuylkill,	Injured; a piece of coal fell on him.
	25 John Novick,	Polish.	Miner,	43	M.	Oneida No. 2,	Schuylkill,	Body bruised by flying coal, due to a premature blast.
Feb.	1 Patrick Stack,	American.	Miner,	28	S.	Mahanoy City,	Schuylkill,	Leg broken by piece of coal falling on him.
	1 John Uman,	Polish.	Miner,	39	M.	Autenreid,	Schuylkill,	Injured; timber broke in an old breast.
	2 Frank Ruman,	Polish.	Miner,	23	S.	Knickerbocker,	Schuylkill,	Injured by an explosion of dynamite.
	4 Cesar Lorah,	German.	Laborer,	31	M.	Honey Brook,	Schuylkill,	Burned by putting oil into a stove instead of coal.
	4 Wm. Brogan,	Scottish.	Laborer,	37	S.	Honey Brook,	Schuylkill,	Burned in the same way as Lorah.
	5 James Heeney,	Irish.	Miner,	38	M.	Pack Mountain,	Schuylkill,	Injured by defective squib.
	7 Peter Sussintuckie,	Polish.	Laborer,	33	M.	Pack Mountain,	Schuylkill,	Leg broken; arm and head about the head; while piece of rock was being hoisted the rope broke.
	11 Mart Cheslavsky,	Polish.	Leader,	26	S.	Knickerbocker,	Schuylkill,	Back injured; a piece of coal fell on him.
	15 Joe Benescl,	Polish.	Miner,	37	M.	Shoemead City,	Schuylkill,	Hand blown off, body and head cut; while tamping a hole the charge exploded.
	16 Nicholas Whalen,	American.	Other,	24	S.	Schuylkill washery,	Schuylkill,	Arm broken; caught in a wheel.
March.	7 Joe Harfacke,	Polish.	Miner,	22	M.	Klangowan,	Schuylkill,	Leg broken; a piece of coal fell on him.
	22 Thomas Fey,	Irish.	Slate picker,	14	S.	North Mahanoy,	Schuylkill,	Severely injured; was caught and drawn into the rope sheave.
	7 Ant. Brennan,	Polish.	Driver,	18	S.	Mahanoy City,	Schuylkill,	Leg broken; he slipped and fell.
	10 John Isaac,	Polish.	Miner,	18	M.	Silver Brook,	Schuylkill,	Injured by fall of coal.
	12 Harry Boardman,	English.	Timberman,	40	M.	Suffolk,	Schuylkill,	Injured by falling down slope.
13	Mich. Sheavagne,	Polish.	Miner,	49	M.	Indian Ridge,	Schuylkill,	Ankle broken; a piece of coal fell on him.

17	Michael Harzay.	Hungarian.	Ashman.	55	S.	And-nood.	Schuykill.	Ribs fractured riding on a truck, when it jumped the track and threw him on the rail.
19	Ant. Crokus.	Polish.	Lead-er.	48	S.	Prim-ess.	Schuykill.	Leg fractured; a lump of coal struck him.
20	John Ripko.	Russian.	Fireman.	27	M.	And-nood.	Schuykill.	Burned by steam from a boiler that exploded.
24	Wm. McIw.	American.	Miner.	40	M.	And-nood.	Schuykill.	Hamis and face burned by gas.
26	Thos. Seath.	American.	Miner.	28	M.	North Mahanoy.	Schuykill.	Knee cap broken by falling down man-way.
4	John Ryan.	Irish.	Miner.	24	M.	Packer No. 5.	Schuykill.	Leg broken; a piece of coal fell on it.
5	Henry Wheeler.	American.	Laborer.	46	M.	Knickerbocker.	Schuykill.	Shoulder and leg injured by a car.
5	Matt. Wscherski.	Polish.	Laborer.	26	M.	Turkey Run.	Schuykill.	Leg broken by falling.
9	Ant. Cook.	Polish.	Driver.	29	M.	Packer No. 5.	Schuykill.	Leg broken; attempted to step on trip when it was moving; his foot slipped with it.
14	Wm. Millard.	English.	Miner.	37	M.	Indian Kill.	Schuykill.	Leg broken by lumber falling on him.
15	Joseph Beckus.	Polish.	Laborer.	25	M.	St. Nicholas.	Schuykill.	Leg broken; a lump of coal fell on him.
19	Luke Powil.	American.	Laborer.	20	M.	Ellangowan.	Schuykill.	Ribs fractured by being kicked him.
22	John Cassidy.	American.	Laborer.	25	M.	And-nood.	Schuykill.	Squeezed between planks.
24	Geo. Biedin.	Russian.	Laborer.	27	M.	Packer No. 5.	Schuykill.	Burned by gas.
24	Chas. Jasdis.	Russian.	Miner.	24	M.	Packer No. 5.	Schuykill.	Burned by gas.
24	John Cain.	Polish.	Miner.	29	M.	Packer No. 5.	Schuykill.	Burned by gas.
28	Wm. Davis.	Welsh.	Miner.	34	M.	Packer No. 5.	Schuykill.	Burned by gas.
28	Ed Davis.	Welsh.	Miner.	28	M.	Packer No. 5.	Schuykill.	Burned by gas.
28	Steve Poroske.	Hungarian.	Miner.	36	M.	Packer No. 5.	Schuykill.	Burned by gas.
29	Edw. Stos.	Russian.	Miner.	22	M.	Packer No. 5.	Schuykill.	Burned by gas.
29	Edw. Stos.	Russian.	Miner.	22	M.	Packer No. 5.	Schuykill.	Burned by gas.
31	John Chubinski.	Polish.	Miner.	20	M.	Packer No. 5.	Schuykill.	Burned by gas.
31	Chas. Bridgman.	American.	Laborer.	37	M.	Shenandoah City.	Schuykill.	These two men were burned by powder.
5	Andrew Hyten.	Polish.	Laborer.	40	M.	And-nood.	Schuykill.	Burned by powder.
6	Samuel Under-savage.	Polish.	Shoe packer.	16	M.	Ellangowan.	Schuykill.	Injured; caught between cars and platform.
8	Stanley Black.	Polish.	Footman.	21	M.	And-nood.	Schuykill.	Head injured by prop falling on him.
13	Matt Kulis.	Polish.	Miner.	43	M.	Ellangowan.	Schuykill.	Both wrists broken and skull fractured by falling from banister around.
14	Mich. McDonald.	Irish.	Miner.	12	M.	Indian Ridge.	Schuykill.	Fingers mashed; caught between car and drill.
14	Chas. Dixon.	Polish.	Miner.	67	M.	Ellangowan.	Schuykill.	Injured by a piece of slate falling on him.
15	John Senter.	Polish.	Mason foreman.	35	M.	Maple Hill.	Schuykill.	Collar bone broken; a piece of coal fell on him.
17	Joe Pedranchins.	Polish.	Miner.	45	M.	Shenandoah City.	Schuykill.	Injured by a blast.
18	Mike Hombock.	Russian.	Laborer.	34	M.	Honey Brook.	Schuykill.	Leg fractured; shoulder broken and internally injured; struck by a car.
21	Amadeus Maddock.	Polish.	Miner.	56	M.	North Mahanoy.	Schuykill.	Leg broken by a piece of coal falling on it.
25	Ant. Witkowski.	Polish.	Miner.	55	M.	Wm. Penn.	Schuykill.	Leg and back injured by fall of rock.
26	Patrick Mulhall.	American.	Driver.	54	M.	West Shenandoah.	Schuykill.	Ribs fractured by fall of coal.
18	John Garney.	Polish.	Miner.	52	M.	Ellangowan.	Schuykill.	Squeezed between car and chute.
23	John Cull.	Irish.	Miner.	55	M.	Packer No. 5.	Schuykill.	Leg broken by drill striking it.
23	Paul Gals.	Lithuanian.	Miner.	48	M.	Tunnel Ridge.	Schuykill.	Back injured by fall of coal.
24	Joe Pachetines.	Russian.	Miner.	40	M.	Tunnel Ridge.	Schuykill.	Face and hands burned by gas.
24	Anthony Hardy.	Russian.	Miner.	40	M.	Packer No. 5.	Schuykill.	Leg broken by piece of top coal.

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Seventh Anthracite District.

NORTHUMBERLAND, COLUMBIA, SCHUYLKILL AND DAUPHIN
COUNTIES.

Shamokin, Pa., March 25, 1903.

Hon. James W. Latta, Secretary of Internal Affairs, Harrisburg,
Pa.

Sir: I have the honor herewith of submitting my report as Inspector of Mines for the Seventh Anthracite District for the year ending December 31, 1902.

The total production of coal was 3,968,339 tons, a decrease of 3,084,489 tons from that of the preceding year; the average number of days worked was 116.3 against 216 in 1901. All these decreases were attributable to the strike which continued five months during the year.

There were 19,856 employes, which is an increase of 12 over the number in 1901.

To produce this quantity of coal, 77,105 kegs of powder and 295,272 pounds of dynamite were used. The number of fatal accidents was 46, 16 less than occurred the previous year, and the number of non-fatal ones was 58, 37 less than the preceding year. The number of tons produced per life lost was 86,268 and 68,419 tons were produced per each non-fatal accident.

Respectfully,

EDWARD BRENNAN,

Inspector.

SUMMARY OF STATISTICS FOR 1902.

Number of mines in district,	37
Number of mines in operation during 1902,	32
Number of tons of coal produced,	3,968,339
Number of tons shipped to market,	3,118,676
Number of tons sold at mines to local trade,	96,648

Number of tons consumed at mines in generating steam and heat,	753,015
Number of persons employed inside the mines,	12,610
Number of persons employed outside,	7,246
Number of fatal accidents inside the mines,	41
Number of tons produced for each fatal accident inside,	96,789
Number of persons employed per fatal accident inside,	308
Number of fatal accidents outside,	5
Number of persons employed per fatal accident outside,	1,449
Number of wives made widows by fatal accidents, ..	28
Number of children orphaned by fatal accidents, ...	72
Number of non-fatal accidents inside of mines,	41
Number of persons employed per non-fatal accident inside,	308
Number of non-fatal accidents outside,	17
Number of persons employed per non-fatal accident outside,	426
Number of steam locomotives used inside,	40
Number of compressed air locomotives used inside, ..	2
Number of electric motors used inside,	6
Number of fans used for ventilation,	70
Number of gaseous mines in operation during 1902, ..	26
Number of non-gaseous mines in operation during 1902,	6
Number of new mines opened in 1902,	None
Number of old mines abandoned during 1902,	1

A. Production of Coal During the Year 1902.

Names of Companies.

	Tons.
Philadelphia and Reading Coal and Iron Company, ..	1,507,623
T. M. Righter & Co.,	43,756
Seneca Coal Company,	46,983
The Union Coal Company,	583,801
Mineral Railroad and Mining Company,	427,864
The Summit Branch and Lykens Valley Coal Company,	377,983
Excelsior Coal Company,	108,823
Midvalley Coal Company,	242,503
The Enterprise Coal Company,	147,536
Shipman Coal Company,	53,907
Greenough Red Ash Coal Company,	64,788
White & White,	39,554

Llewellyn Mining Company,	9,552
Shamokin Coal Company,	103,312
Lehigh Valley Coal Company,	210,354
<hr/>	
Total,	3,968,339
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Total production was made up as follows:

Shipments by railroad to market,	3,118,676
Sold at mines for local use,	96,648
Consumed to generate steam,	753,015
<hr/>	
Total,	3,968,339
<hr/>	

11. Showing the number of fatal and non-fatal accidents inside and outside the mines; number of tons of coal produced per fatal and non-fatal accident inside the mines; number of persons employed inside and outside; and the number employed inside and outside for every fatal and non-fatal accident for each company during 1902.

Name of Companies	Number of lives lost inside.	Number of lives lost outside.	Total number of lives lost.	Number severely injured inside.	Number severely injured outside.	Total number severely injured.	Tons of coal produced per each life lost inside.	Tons of coal produced per serious injury inside.	Number employees inside of mines.	Number employees outside of mines.	Total number employed.	Number of employees inside for each life lost.	Number of employees inside for each severe injury.	Number of employees outside for each life lost.	Number of employees outside for each severe injury.
Philadelphia and Reading Coal and Iron Co.,	13	1	14	15	6	21	115,971	40,298	4,516	2,538	7,054	347	381	2,538	423
T. M. Richter & Co.,	1	1	2	1	1	2	43,756	43,756	71	196	267	71	71	196	267
Severn Coal Co.,	3	1	4	3	4	7	46,983	15,661	134	112	246	134	45	112	132
The Union Coal Co.,	14	1	15	14	4	18	194,690	83,400	2,113	1,237	3,350	715	386	1,237	301
Strossel, Richland and Mining Co.,	1	1	2	1	1	2	39,361	106,965	1,202	665	1,867	113	298	412	665
Summit Branch and Lykens Valley Coal Co.,	1	1	2	1	3	4	377,933	377,933	1,120	825	1,945	1,120	1,239	275	685
Enterprise Coal Co.,	1	1	2	1	1	2	108,823	34,411	313	313	626	213	156	164	275
Union Valley Coal Co.,	1	1	2	1	1	2	242,003	242,003	404	235	639	494	494	235	235
Enterprise Coal Co.,	1	1	2	1	1	2	117,736	117,736	156	146	302	156	187	146	187
Shipman Coal Co.,	1	1	2	1	1	2	23,907	26,933	156	146	302	156	187	146	187
Grainough Red Ash Coal Co.,	1	1	2	1	1	2	64,788	61,788	277	96	373	277	277	96	373
White & White,	1	1	2	1	1	2	39,334	39,334	163	75	238	163	163	75	238
Llewellyn Mining Co.,	2	1	3	2	1	3	51,656	51,656	541	388	929	541	388	929	541
Shanklin Coal Co.,	1	1	2	1	1	2	105,177	70,118	444	298	742	444	298	742	298
Lehigh Valley Coal Co.,	1	1	2	1	1	2	105,177	70,118	444	298	742	444	298	742	298
Totals,	41	5	46	41	17	58	96,729	68,419	12,610	7,246	19,856	5,041	4,408	9,833	3,633
Averages,									841	483	1,324	336	298	456	247

C. Classification of Fatal Accidents for the Year 1902.

Inside of Mines.												Outside of Mines.						Grand total.					
By Falls of			By Falling into									Total Inside.											
Coal.	State.	Roof.	By mine cars.	By explosion of gas.	Smothered by gas.	Powder and dynamite.	By blasts, etc.	Shafts.	Slopes.	Manways, breasts, etc.	Crushed at batteries.	By mules.	Suffocated by coal, etc.	Miscellaneous causes.	Total Inside.	By cars.	By machinery.	By suffocation.	By boiler explosions.	Miscellaneous causes.	Total outside.		
January	1	1	1	2						1		1	2	3	6	2					1	1	46
February										1					1							1	5
March										1					1							1	6
April	1	1	1							1			1	3	6	1						2	10
May	1														1							1	1
June															1							1	2
July															1							1	1
August															1							1	1
September															1							1	1
October															1							1	1
November															1							1	1
December															1							1	1
Totals.	1	2	2	10		1	4	1	1	2		1	8	8	41	2			2		1	5	46

G. Nationality of Employes Killed or Fatally Injured Inside and Outside the Mines During 1902.

	Americans.	English.	Welsh.	Irish.	Germans.	Poles.	Hungarians.	Italians.	Slavs.	Austrians.	Russians.	Total.
January,	2					2		1	1	1	2	9
February,	2				1	1	1		1		2	10
March,	2		1	1		1						5
April,	2			1				2				8
May,		1			1							2
August,	1											1
November,	1		1			1				1	4	7
December,	1		1			2						4
Totals,	15	1	2	2	2	7	1	3	2	2	9	46

H. Nationality of Employes Severely Injured Inside and Outside the Mines During 1902.

	Americans.	English.	Welsh.	Irish.	Germans.	Poles.	Italians.	Lithuanians.	Austrians.	Russians.	Total.
January,	7	4		3		3			2	1	20
February,	5			1		2			1		9
March,	5		1		1	2		1			9
April,	5				1	2	2				12
May,	1					1					2
November,	2				1						3
December,	2				1						3
Totals,	26	4	1	4	3	12	2	1	3	1	58

Examination of Applicants for Mine Foreman Certificates.

The annual examination of applicants for mine foreman certificates in the Seventh Anthracite District was held at Pottsville, April 24 and 25, 1902, before the following board, viz: Edward Brennan, Mine Inspector, Shamokin; Andrew Robertson, coal operator, Pottsville; Jacob Fleming, miner, Excelsior, and Joseph Corbe, miner, Ashland.

The following were recommended to receive certificates:

Mine Foremen.

Thomas Fitzpatrick, Williamstown.

Peter Shovlin, Mount Carmel.

Thomas McNamara, Williamstown.

William Schucker, Shamokin.

Charles Lickinger, Lykens.

Lewis Howells, Sagon.

George Nolter, Mount Carmel.

Joseph Marsh, Centralia.

Albert Clews, Centralia.

Jacob Fleming, Excelsior.

Morton Lamb, Centralia.

John L. Schickley, Shamokin.

Kearn Donohue, Centralia.

Edward McHugh, Mount Carmel.

TABLE I—Showing names of operators, railroads, etc., and location of collieries in the Seventh Anthracite District for the year 1902.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Philadelphia and Reading Coal and Iron Co.						
Burnside,	Northumberland,	R. C. Luther,	Pottsville,	John Veith,	Pottsville,	Philadelphia and Reading.
Bear Valley,	Northumberland,	R. C. Luther,	Pottsville,	John Veith,	Pottsville,	Philadelphia and Reading.
Henry Clay,	Northumberland,	R. C. Luther,	Pottsville,	John Veith,	Pottsville,	Philadelphia and Reading.
Big Mountain,	Northumberland,	R. C. Luther,	Pottsville,	John Veith,	Pottsville,	Philadelphia and Reading.
Stirling,	Northumberland,	R. C. Luther,	Pottsville,	John Veith,	Pottsville,	Philadelphia and Reading.
North Franklin,	Northumberland,	R. C. Luther,	Pottsville,	John Veith,	Pottsville,	Philadelphia and Reading.
Alaska,	Northumberland,	R. C. Luther,	Pottsville,	John Veith,	Pottsville,	Philadelphia and Reading.
Reliance,	Northumberland,	R. C. Luther,	Pottsville,	John Veith,	Pottsville,	Philadelphia and Reading.
Locust Gap,	Northumberland,	R. C. Luther,	Pottsville,	John Veith,	Pottsville,	Philadelphia and Reading.
Locust Spring,	Northumberland,	R. C. Luther,	Pottsville,	John Veith,	Pottsville,	Philadelphia and Reading.
Miriam,	Northumberland,	R. C. Luther,	Pottsville,	John Veith,	Pottsville,	Philadelphia and Reading.
Pottsville,	Northumberland,	R. C. Luther,	Pottsville,	John Veith,	Pottsville,	Philadelphia and Reading.
East,	Schuylkill,	R. C. Luther,	Pottsville,	John Veith,	Pottsville,	Philadelphia and Reading.
Preston No. 3,	Schuylkill,	R. C. Luther,	Pottsville,	John Veith,	Pottsville,	Philadelphia and Reading.
T. M. Hightler & Co.						
Mount Carmel,	Northumberland,	S. D. Warriner,	Wilkes-Barre,	R. S. Mercur,	Centralla,	Lehigh Valley.
Seneca Coal Co.						
Sioux,	Northumberland,	S. D. Warriner,	Wilkes-Barre,	R. S. Mercur,	Centralla,	Lehigh Valley.
The Union Coal Co.						
Pennsylvania,	Northumberland,	Morris Williams,	Wilkes-Barre,	Wm. R. Reinhardt,	Shamokin,	Pennsylvania R. R. (N. C.)
Hickory Swamp,	Northumberland,	Morris Williams,	Wilkes-Barre,	Wm. R. Reinhardt,	Shamokin,	Pennsylvania R. R. (N. C.)
Hickory Tulpe,	Northumberland,	Morris Williams,	Wilkes-Barre,	Wm. R. Reinhardt,	Shamokin,	Pennsylvania R. R. (N. C.)
Brooks,	Northumberland,	Morris Williams,	Wilkes-Barre,	Wm. R. Reinhardt,	Shamokin,	Pennsylvania R. R. (N. C.)
Scott shaft,	Northumberland,	Morris Williams,	Wilkes-Barre,	Wm. R. Reinhardt,	Shamokin,	Pennsylvania R. R. (N. C.)
Mineral Railroad and Mining Co.						
Cameron,	Northumberland,	Morris Williams,	Wilkes-Barre,	Robert A. Quinn,	Shamokin,	Pennsylvania R. R. (N. C.)
Lake Elder,	Northumberland,	Morris Williams,	Wilkes-Barre,	Robert A. Quinn,	Shamokin,	Pennsylvania R. R. (N. C.)
Summit Branch and Lykens Valley Coal Co.						
Williams-town,	Dauphin,	Morris Williams,	Wilkes-Barre,	Hoel McKay,	Lykens,	Pennsylvania Railroad.
Short Mountain,	Dauphin,	Morris Williams,	Wilkes-Barre,	Hoel McKay,	Lykens,	Pennsylvania Railroad.

TABLE I—Continued.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Excelsior Coal Co.						
Excelsior, Corbin.	Northumberland.	Andrew Robertson.	Shamokin,	A. D. Robertson.	Shamokin,	Philadelphia and Reading.
Midvalley Coal Co.	Northumberland.	Andrew Robertson.	Shamokin,	G. W. Robertson.	Shamokin,	Philadelphia and Reading.
Midvalley No. 1.	Columbia.	.....	.....	T. E. Snyder.	Wilburton,	Lehigh Valley.
Midvalley No. 2.	Columbia.	.....	.....	T. E. Snyder.	Wilburton,	Lehigh Valley.
Enterprise Coal Co.	Northumberland.	W. L. Connell.	Scranton, .....	.....	.....	Philadelphia and Reading.
Enterprise.	Northumberland.	.....	.....	.....	.....	.....
Shuman Coal Co.	Northumberland.	.....	.....	E. J. Corliss.	Shamokin,	Pennsylvania R. R. (N. C.)
Colbert.	Northumberland.	.....	.....	.....	.....	Pennsylvania R. R. (N. C.)
Greenpough Red Ash.	Northumberland.	George C. Graeber.	Shamokin, .....	.....	.....	Lehigh Valley.
Greenough.	Northumberland.	E. E. White.	Mt. Carmel, .....	.....	.....	Lehigh Valley.
White & White.	Northumberland.	.....	.....	.....	.....	Lehigh Valley.
Columbus No. 2.	Northumberland.	.....	.....	.....	.....	Lehigh Valley.
Llewellyn Mining Co.	Northumberland.	.....	.....	Wm. H. Llewellyn.	Shamokin,	Philadelphia and Reading.
Royal Oak.	Northumberland.	.....	.....	.....	.....	Philadelphia and Reading.
Natalie.	Northumberland.	Nathaniel Taylor.	Natalie,	G. W. Moon.	Natalie,	Philadelphia and Reading.
Shamokin Coal Co.	Northumberland.	.....	.....	.....	.....	Philadelphia and Reading.
Lehigh Valley Coal Co.	Columbia.	S. D. Warriner.	Wilkes-Barre,	R. S. S.	Centralla,	Lehigh Valley.
Logan.	Columbia.	S. D. Warriner.	Wilkes-Barre,	R. S. S.	Centralla,	Lehigh Valley.
Continental.	Columbia.	S. D. Warriner.	Wilkes-Barre,	R. S. S.	Centralla,	Lehigh Valley.
Big Mine Run.*	Schuykill.	S. D. Warriner.	Wilkes-Barre,	R. S. S.	Centralla,	Lehigh Valley.
Locust Run,†	Columbia.	S. D. Warriner.	Wilkes-Barre,	R. S. S.	Centralla,	Lehigh Valley.
Remo,‡	Columbia.	S. D. Warriner.	Wilkes-Barre,	R. S. S.	Centralla,	Lehigh Valley.
Montana,§	Columbia.	S. D. Warriner.	Wilkes-Barre,	R. S. S.	Centralla,	Lehigh Valley.
Belmont,||	Columbia.	S. D. Warriner.	Wilkes-Barre,	R. S. S.	Centralla,	Lehigh Valley.
Morris Ridge,¶	Columbia.	S. D. Warriner.	Wilkes-Barre,	R. S. S.	Centralla,	Lehigh Valley.

*Included in Centralla.
 †Including station.
 ‡Abandoned.

TABLE II—Gives the total number of tons of coal mined in each colliery, number of days worked, number of employees, number of employees killed and injured, number of kegs of powder, etc., used in the Seventh Anthracite District for the year ending December 31, 1902.

Names of Operators and Collieries.	County.	Number of tons of coal mined in each colliery, number of days worked, number of employees, number of employees killed and injured, number of kegs of powder, etc., used in the Seventh Anthracite District for the year ending December 31, 1902.										
		Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Philadelphia and Reading Coal and Iron Co.	Northumberland.	133,755	38,365	3,923	176,043	139.8	811	2	2	3,755	8,426	129
Burnside.	Northumberland.	95,096	11,814	4,730	111,640	125.6	327	1	1	916	842	69
Bear Valley.	Northumberland.	54,324	27,240	5,504	87,167	110.6	444	2	5	2,481	4,603	70
Henry Clay.	Northumberland.	138,698	19,288	4,210	162,196	145.6	115	2	2	276	688	67
Big Mountain.	Northumberland.	131,494	15,984	114	147,627	135.6	607	2	1	2,892	12,154	67
North Franklin.	Northumberland.	113,883	13,402	6,107	133,391	117	672	1	2	4,204	8,840	85
Alaska.	Northumberland.	216,982	79,946	1,314	298,442	129	306	1	2	3,976	4,807	56
Redbank.	Northumberland.	41,132	33,556	.....	41,132	178	441	1	3	2,758	4,706	52
Loose Top.	Northumberland.	107,368	23,760	5,606	206,134	150.4	918	2	2	2,135	11,382	83
Loose Spring.	Northumberland.	40,489	23,137	.....	40,489	97.8	1	.....	.....	.....	.....	.....
Loose Spring washery.	Northumberland.	115	1,293	98	13,016	.....	858	2	3	167	17,690	71
Meriam.	Northumberland.	1,157,343	222,494	32,186	1,507,023	133.6	622	1	.....	.....	118	10
Past.	Northumberland.	36,627	6,670	179	43,756	54.2	77	.....	.....	.....	.....	.....
Preston No. 3.	Northumberland.	36,192	3,129	602	46,983	117.6	246	1	4	1,611	2,247	31
T. M. Richter & Co.	Northumberland.	175,461	27,828	5,097	209,105	122.5	246	1	4	1,611	2,247	31
Mt. Carmel.	Northumberland.	57,336	12,611	384	70,321	116.4	1,122	2	2	6,488	14,670	107
Seneca Coal Co.	Northumberland.	.....	.....	.....	.....	.....	437	.....	.....	.....	.....	64
Stouff.	Northumberland.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
The Union Coal Co.	Northumberland.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pennsylvania.	Northumberland.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hickory Swamp.	Northumberland.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

*Totals in this column are averages.

TABLE II—Continued.

Names of Operators and Collieries	County	Shipments of coal in tons by rail or otherwise.										Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Hickory Ridge, Richards, Scott.	Northumberland, Northumberland, Northumberland.	51,118 124,116 448,061	33,695 47,025 4,538 126,257	1,144 1,208 3,413	115,957 183,279 129,56 441	651 964 186 3,330	1 3 11	2,451 3,968 1,150 14,462	3,126 11,580 89 1,150 30,812	52 89 7 3%									
Mineral Railroad and Mining Co. Cameron, Lake Elder.	Northumberland, Northumberland, Northumberland.	223,640 128,574 351,714	30,874 22,239 53,464	10,573 12,173 22,746	263,087 162,777 127,56 427,894	1,455 892 2,257	6 9 15	..... ..... ..... 5	6,578 3,997 10,485	16,503 11,369 27,872	141 71 212									
Summit Branch and Lykens Valley Coal Co. Williamstown, Short Mountain.	Dauphin, Dauphin,.....	77,464 128,974 263,438	111,513 43,149 160,632	5,435 8,748 13,883	194,112 183,871 127,56 377,982	844 1,101 1,945	3 3	..... ..... ..... 4	1,578 1,152 3,139	7,470 3,894 153 13,374	76 153 229									
Excelsior Coal Co. Excelsior, Corbin.	Northumberland, Northumberland, Northumberland.	66,760 33,042 99,802	3,729 5,040 8,769	261 261	79,741 28,082 166,1 168,827	251 226 477	1 1	..... ..... ..... 2	1,412 1,378 2,799	189 223 463	32 32 51									
Midvalley Coal Co. Midvalley No. 2, Enterprise Coal Co. Enterprise.	Columbia, Columbia, Northumberland, Northumberland.	292,992 131,887 424,879	8,296 15,224 23,520	1,311 325 1,636	242,563 147,536 390,099	729 591 1,320	1 1 1	..... ..... ..... 5,096	3,298 87,621	87,621 2,751	87 61 64									

Colbert,	Shipman Coal Co.	Northumberland,	18,505	4,003	1,399	52,907	115.8	312	.....	2	1,678	2,200	23
Greenough,	Greenough Red Ash Coal Co.	Northumberland,	61,708	3,000	80	64,788	132.3	373	1	.....	1,875	4,250	13
Columbia No. 2,	White & White,	Northumberland,	34,141	935	4,478	39,554	103.4	238	1	.....	3,100	3,000	16
Royal Oak,	Llewellyn Mining Co.	Northumberland,	8,506	558	494	9,552	46	316	.....	1	210	200	14
Natalle,	Shamokin Coal Co.	Northumberland,	84,979	15,060	3,333	103,312	113.5	929	2	2	2,350	1,500	73
Centralia,	Lehigh Valley Coal Co.	Columbia,	186,787	17,679	5,888	210,354	121.2	724	3	4	2,725	36,673	94
Logan, .....	.....	Columbia,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Continental, .....	.....	Columbia,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Big Mine Run, .....	.....	Schuylkill,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Locust Run, .....	.....	Columbia,	.....	.....	.....	.....	.....	18	.....	.....	.....	.....	2
Reno, .....	.....	Columbia,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Montana, .....	.....	Columbia,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Belmore, .....	.....	Columbia,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Morris Bluffs, .....	.....	Columbia,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grand totals, .....	.....	.....	186,787	17,679	5,888	210,354	121.2	742	3	4	2,725	36,673	96
.....	.....	.....	3,118,675	102,015	96,648	3,308,331	121.2	19,856	46	78	77,115	295,272	2,015

Abandoned.

Totals in this column are averages.

Included in Centralia
pumping station.

TABLE II—Continued.

Names of Operators and Collieries.	County.	Number of Boilers.			Horse power.	Tubular.	Horse power.	Total horse power.	Locomotives.			Number steam engines of all classes.	Total horse power.	Number pumps delivering water to surface.	Capacity in gallons per minute.	Quantity delivered to surface per minute—gallons.	Number electric dynamos.	Number air compressors.
		Cylindrical.							Steam.	Air.	Electric.							
		Horse power.																
Phila. and Reading Coal and Iron Co., ..	Northumberland.	66	2,274	112	14,566	16,834	159	2	8	159	19,539	46,185	39,345	59	46,185	39,345	.....	2
T. M. Rickard & Co.,	Northumberland.	20	580	4	1,060	1,580	17	.....	1	17	1,172	3,570	3,570	.....	3,570	3,570	.....	.....
Shawmut Coal Co.,	Northumberland.	16	196	6	1,650	1,650	13	.....	1	13	1,321	3,713	3,713	.....	3,713	3,713	.....	.....
The Union Coal Co.,	Northumberland.	16	196	59	6,140	6,336	13	.....	6	13	7,874	16,795	5,293	21	16,795	5,293	.....	.....
Mineral Railroad and Mining Co., ..	Northumberland.	6	120	21	2,876	3,000	74	.....	4	74	6,176	4,738	1,388	11	4,738	1,388	.....	.....
Summit Branch & Lehigh Valley Coal Co.,	Dauphin.	102	4,486	35	6,945	11,935	9	.....	9	48	4,172	11,022	7,063	13	11,022	7,063	.....	.....
Excelsior Coal Co.,	Northumberland.	36	1,680	11	2,400	1,680	1	.....	1	15	337	1,068	1,068	.....	1,068	1,068	.....	.....
Marysville Coal Co.,	Columbia.	.....	.....	16	2,000	2,000	3	.....	3	8	1,296	2,290	2,290	.....	2,290	2,290	.....	.....
Enterprise Coal Co.,	Northumberland.	5	135	15	1,460	2,000	11	.....	.....	41	1,156	1,296	800	.....	1,296	800	.....	.....
Shipman Coal Co.,	Northumberland.	.....	.....	3	270	1,050	.....	.....	.....	4	500	1,000	100	.....	1,000	100	.....	.....
Greenough Red Ash Coal Co.,	Northumberland.	4	120	1	40	180	.....	.....	.....	6	115	307	287	.....	307	287	.....	.....
White & White,	Northumberland.	.....	.....	2	240	300	.....	.....	1	6	260	507	507	.....	507	507	.....	.....
Llewellyn Mining Co.,	Northumberland.	17	54	8	760	1,100	.....	.....	.....	18	839	1,200	1,200	.....	1,200	1,200	.....	.....
Shawmut Coal Co.,	Northumberland.	15	36	16	2,400	2,800	.....	.....	.....	46	8,374	1,158	1,158	.....	1,158	1,158	.....	.....
Lehigh Valley Coal Co.,	Columbia.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grand totals.	.....	281	9,919	298	41,780	51,639	40	2	40	467	54,158	123	94,362	123	94,362	68,165	9	9

TABLE III.—Showing the number of each class of employes at each colliery in the Seventh Anthracite District during the year 1902.

Names of Operators and Collieries	County.	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.							Grand total inside and outside.		
		Total inside.										Total outside.									
		Mine foremen.	Assistant mine foremen.	Fire bosses and assistants.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	Pumpmen.	Company men.	All other employes.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers (boys).	State pickers (men).	Book-keepers and clerks.		All other employes.	Total outside.
P. & R. Coal and Iron Co.	North'd.	2	1	6	264	98	35	12	...	40	48	566	1	10	22	112	25	2	133	305	871
Burnside.	North'd.	1	1	4	142	46	21	5	...	11	51	288	1	1	1	9	...	...	27	39	27
Stirling.	North'd.	1	1	4	79	37	16	6	...	31	44	218	2	10	25	49	26	3	117	226	441
Henry Clay.	North'd.	1	1	4	176	17	12	...	...	8	22	118	1	1	1	...	...	...	1	...	118
Big Mountain.	North'd.	1	1	4	176	17	12	...	...	8	22	118	1	1	1	...	...	...	1	...	118
Near Valley.	North'd.	1	1	4	176	17	12	...	...	8	22	118	1	1	1	...	...	...	1	...	118
Big Mountain.	North'd.	1	1	4	176	17	12	...	...	8	22	118	1	1	1	...	...	...	1	...	118
Franklin.	North'd.	1	1	4	176	17	12	...	...	8	22	118	1	1	1	...	...	...	1	...	118
Alaska.	North'd.	1	1	4	176	17	12	...	...	8	22	118	1	1	1	...	...	...	1	...	118
Reliance.	North'd.	1	1	4	176	17	12	...	...	8	22	118	1	1	1	...	...	...	1	...	118
Locust Gap.	North'd.	1	1	4	176	17	12	...	...	8	22	118	1	1	1	...	...	...	1	...	118
Locust.	North'd.	1	1	4	176	17	12	...	...	8	22	118	1	1	1	...	...	...	1	...	118
Locust Siding washery.	North'd.	1	1	4	176	17	12	...	...	8	22	118	1	1	1	...	...	...	1	...	118
Morrison.	North'd.	1	1	4	176	17	12	...	...	8	22	118	1	1	1	...	...	...	1	...	118
Potts.	North'd.	1	1	4	176	17	12	...	...	8	22	118	1	1	1	...	...	...	1	...	118
Best.	North'd.	1	1	4	176	17	12	...	...	8	22	118	1	1	1	...	...	...	1	...	118
Schuyler.	North'd.	1	1	4	176	17	12	...	...	8	22	118	1	1	1	...	...	...	1	...	118
Preston No. 3.	North'd.	1	1	4	176	17	12	...	...	8	22	118	1	1	1	...	...	...	1	...	118
Totals.		17	1	62	1,900	633	340	138	5	223	914	4,316	14	86	252	704	215	25	1,242	2,538	7,054
M. Richter & Co.	North'd.	1	1	4	5	9	5	1	5	20	23	71	1	7	12	33	...	1	139	196	267
Stonewall.	North'd.	1	1	4	18	13	5	2	5	17	43	124	1	8	9	23	...	1	70	112	246
The Union Coal Co.	North'd.	1	1	4	372	118	46	12	9	181	17	523	1	13	27	48	6	33	291	389	1,122
Nickery Swamp.	North'd.	1	1	4	95	45	29	11	9	94	11	282	1	4	11	38	...	1	113	174	457

TABLE III.—Continued.

Names of Operators and Col- lieries.	County.	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.										Grand total inside and outside.
		Total inside.										Total outside.										
		Mine foremen.	Assistant mine foremen.	Pit bosses and assistants.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	Pumpmen.	Company men.	All other employes.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers (boys).	State pickers (men).	Coal-keepers and clerks.	All other employes.			
Tuckery Ridge, Richards, Scott.	North'd, North'd, North'd.	1	1	4	156	77	22	2	16	56	18	385	1	8	23	73	11	3	115	266	651	
		1	1	9	234	87	30	18	6	156	73	609	1	9	21	76	27	3	167	304	904	
		1	1	1	1	1	1	1	8	1	1	82	1	1	16	76	1	1	87	164	186	
Totals.		3	10	28	867	329	127	45	35	527	170	2,143	3	20	92	267	49	12	773	1,237	3,380	
Mineral Railroad and Mining Co. Cameron, Lake Fidler.	North'd, North'd.	1	6	14	480	160	78	16	8	.....	283	1,046	2	18	23	198	11	6	151	409	1,455
		1	2	9	290	80	32	12	.....	.....	150	546	1	11	21	97	6	5	115	256	802
		2	8	23	740	240	110	28	8	.....	403	1,502	3	29	44	265	17	11	266	635	2,937
Totals.		4	16	46	1,510	480	220	54	20	.....	836	3,094	6	38	68	413	24	22	422	1,290	4,327
Summit Branch and Lykens Val- ley Coal Co. Williamstown, Short Mountain.	Dauphin, Dauphin.	1	1	4	150	30	26	3	26	112	.....	331	1	14	81	70	.....	3	314	513	844
		1	1	5	214	105	86	12	15	318	.....	789	1	18	37	73	.....	4	173	312	1,101
		4	8	9	371	133	112	15	35	439	.....	1,120	2	32	118	143	.....	7	523	825	1,916
Totals.		6	10	18	721	268	224	20	66	869	.....	2,310	4	44	136	183	.....	14	810	1,337	3,647
Excelsior Coal Co. Corbin.	North'd, North'd.	1	2	.....	64	52	13	1	1	14	14	162	1	4	11	18	4	2	48	89	251
		1	2	1	86	29	12	.....	2	13	5	151	1	3	10	15	.....	4	42	75	226
		2	4	1	150	81	25	1	3	27	19	313	2	7	21	33	7	3	90	164	477	
Totals.		4	8	2	200	162	50	2	6	54	38	526	4	14	42	51	13	9	102	228	754	
Midvalley Coal Co. Midvalley No. 2.	Columbia.	3	2	252	136	42	4	4	16	46	19	404	1	2	6	15	80	2	129	235	739
		3	2	252	136	42	4	4	16	46	19	404	1	2	6	15	80	2	129	235	739
		3	2	252	136	42	4	4	16	46	19	404	1	2	6	15	80	2	129	235	739

Enterprise Coal Co.	Enterprise,	1	1	....	213	46	46	6	2	42	17	404	1	1	7	21	59	12	1	85	187	591
Shipman Coal Co.	Colbert,	1	....	1	87	12	12	3	2	48	....	166	1	1	6	11	75	14	2	36	146	312
Greenough Red Ash Coal Co.	Greenough,	2	....	2	160	140	9	....	2	22	....	277	1	1	5	7	45	6	1	30	96	373
White & White	Columbus No. 2,	1	1	....	101	10	15	2	....	3	30	163	1	1	3	3	30	....	1	36	75	238
Llewellyn Mining Co.	Royal Oak,	1	....	2	145	16	15	4	2	19	27	232	1	1	4	5	33	3	1	26	84	316
Shamokin Coal Co.	Natalie,	3	....	2	298	160	60	20	5	26	57	541	2	1	16	25	113	42	6	183	338	929
Lehigh Valley Coal Co.	Centralia,	4	1	2	179	67	43	2	2	41	95	437	1	3	18	21	46	6	3	189	287	724
Logan,	Columbia, .....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Big Mine Run, *	Columbia, .....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Locust Run, †	Columbia, .....	....	....	....	....	....	....	4	3	....	....	7	1	....	4	....	....	....	6	11	18	....
Reno, †	Columbia, .....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Montana, †	Columbia, .....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Belmore, †	Columbia, .....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Morris Ridge †	Columbia, .....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Totals,	Totals,	48	27	140	5,469	2,085	966	271	131	1,616	1,847	12,610	11	40	273	660	1,952	371	76	3,833	7,246	19,856
Grand totals,	Grand totals,	48	27	140	5,469	2,085	966	271	131	1,616	1,847	12,610	11	40	273	660	1,952	371	76	3,833	7,246	19,856

*Included in Centralia.

†Pumping station.

...Abandoned.

TABLE IV—List of fatal accidents that occurred in and about the mines of the Seventh Anthracite District for the year ending December 31, 1902.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan 4	John Witt.	Russian.	Miner.	53	M	1	6	Cameron.	North'd.	Killed by an explosion of gas.
14	Stanley V. Smith.	Russian.	Miner.	42	M	1	3	Cameron.	North'd.	Killed by an explosion of gas.
18	Howard Esler.	American.	Door boy.	18	S	...	...	Centralia.	Columbia.	Killed by falling coal.
	Joseph Murtin.	American.	Car runner.	23	S	...	...			Killed by wagons jumping track and causing lumber to fall on him.
22	Andrew Prochochek.	Slavonic.	Miner.	40	M	1	1	Natalie.	North'd.	Killed by a fall of rock.
28	Tony Meroch.	Italian.	Laborer.	35	M	...	...	Greenough.	North'd.	Back broken by a fall of slate.
29	Vasno Moredski.	Polish.	Miner.	27	S	...	...	Locust Gap.	North'd.	Killed by a fall of slate.
31	Thomas Cherbo.	Polish.	Driver.	25	S	...	...	Excelsior.	North'd.	Killed by running against a brake lever.
31	Anthony Daroba.	Austrian.	Miner.	26	M	1	1	Henry Clay.	North'd.	Burned by an explosion of gas.
Feb. 4	Mike Suto.	Hungarian.	Miner.	35	M	1	5	Henry Clay.	North'd.	Feb. 8. Seriously injured by piece of clod falling on him. Died Feb. 11.
5	Samuel Pulgona.	Russian.	Laborer.	35	M	1	2	Enterprise.	North'd.	Killed while walking under carriage hoist; piece crushing him.
8	Chas. Magourinly.	Slavonic.	Laborer.	26	M	1	1	Natalie.	Schuykill.	Killed by piece of clod falling on his head.
	James Rusk.	American.	Laborer.	21	S	...	...	Preston No. 3.		Killed by falling from platform at water level.
15	Sebastian Shassach.	German.	Driver.	18	S	...	...	North Franklin.	North'd.	Killed by piece of rock falling down slope, striking him.
19	John Startzel.	American.	Miner.	37	M	1	2	Burnside.	North'd.	Killed by falling down manway.
24	Abraham Markle.	American.	Miner.	25	M	1	1	Pennsylvania.	North'd.	Killed by falling down manway.
24	Mike Stankanus.	Russian.	Miner.	25	M	1	1	Cameron.	North'd.	Suffocated by a rush of coal from breast.
28	George Stankanus.	Russian.	Miner.	45	M	1	1	Cameron.	North'd.	Suffocated by a rush of coal from breast.
28	Enoch Cavalskie.	Polish.	Bottom man.	20	M	1	...	Columbus No. 2.	North'd.	Killed by being squeezed between cars.
31	Jeremiah Murray.	Irish.	Bottom man.	40	M	1	...	Williamstown.	North'd.	Suffocated in culm bank.
31	John Hill.	American.	Laborer.	20	M	1	1	Hickory Ridge.	North'd.	Suffocated in culm bank.
31	John Long.	American.	Miner.	23	M	1	1	Midvalley No. 1.	Columbia.	Fell down manway, fracturing skull.
22	Charles Dulic.	Polish.	Laborer.	22	M	1	...			Skull fractured by flying coal from a blast. Died in hospital March 24.
26	Griffith Price.	Welp.	Miner.	47	M	1	6	Alaska.	North'd.	Killed by fall of slate.
2	Isaac Carmichael.	American.	Driver.	23	S	...	...	Pennsylvania.	North'd.	Stuck between cars under mine cars.
12	Patrick Burns.	American.	Miner.	40	M	1	6	Centralia.	Columbia.	Caught by loose coal in breast. Died April 13.

TABLE IV—Continued.

Date of accident	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
13	John Cosgrove,	American,	Laborer,	31	S.	.....	.....	Centralia,	Columbia,	Caught by loose coal in breast; squeezed against pillar.
16	Joe Dermodie,	Italian,	Miner,	24	S.	.....	.....	Locust Spring,	North'd.,	Killed by premature blast.
21	Mark McCormick,	Irish,	Starter,	32	M.	1	1	Bast,	Schuylkill,	While passing a stick of dynamite in hole it exploded.
25	Nicklo Butts,	Italian,	Laborer,	27	M.	1	.....	Williamstown,	Dauphin,	Killed by piece of slate falling from side of shaft.
26	William Eby,	American,	Miner,	19	S.	.....	.....	Bear Valley,	North'd.,	Killed by fall of slate.
30	William Fisher,	American,	Miner,	40	M.	1	7	Burnside,	North'd.,	Killed by premature blast.
May	Peter Shearer,	German,	Miner,	44	M.	1	3	Bast,	Schuylkill,	Killed by premature blast.
3	James Carter,	English,	Leader,	28	M.	1	3	Cameron,	North'd.,	Fell in chute and coal rushed on him.
Aug.	George Nollet,	American,	Asst. foreman,	28	M.	1	.....	Sloux,	North'd.,	Killed by falling down slope.
29	Charles Maroot,	Austrian,	Miner,	36	M.	1	1	Luke Fidler,	North'd.,	Killed by an explosion of gas.
29	Thos. Volandi,	Russian,	Miner,	26	M.	1	3	Luke Fidler,	North'd.,	Killed by an explosion of gas.
29	Wally Zuchevadze,	Russian,	Miner,	30	M.	1	4	Luke Fidler,	North'd.,	Killed by an explosion of gas.
29	Leon Sosnoski,	Russian,	Miner,	26	M.	1	.....	Luke Fidler,	North'd.,	Killed by an explosion of gas.
29	Jesse Koppenhaver,	American,	Miner,	37	M.	1	3	Luke Fidler,	North'd.,	Seriously injured by concussion of gas explosion.
29	Joseph Brasco,	Russian,	Miner,	37	M.	1	.....	Luke Fidler,	North'd.,	Died in Miners' Hospital Dec. 17.
29	Joseph Starauch,	Polish,	Miner,	50	M.	1	.....	Luke Fidler,	North'd.,	Fatally injured from concussion of gas explosion.
Dec.	Jos. Mangold,	American,	Loco con.,	19	S.	.....	.....	Locust Spring,	North'd.,	Killed by falling from locomotive.
17	Paul Ditch,	Polish,	Miner,	25	M.	1	2	Luke Fidler,	North'd.,	Killed by a fall of rock.
23	A. N. Morgan,	Welsh,	Fire boss,	43	M.	1	.....	North Franklin,	North'd.,	Fell through trap door into sump; scalded.
23	Jno. Gratchoskie,	Polish,	Driver,	20	S.	.....	.....	Luke Fidler,	North'd.,	Large piece of rock fell from side of gangway, killing him.

TABLE V—List of non-fatal accidents that occurred in and about the mines of the Seventh Anthracite District for the year ending December 31, 1902.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan.	7 Chas. Musiak.	American.	Miner.	39	M	Cameron.	Northumberland.	Burned by an explosion of gas.
8 Francis Towers.	English.	English.	Repairman.	39	M	Cotts.	Columbia.	Arm broken by being caught in rope wheel.
9 John Bellas.	English.	English.	Repairman.	32	M	Henry Clay.	Northumberland.	Burned by gas.
10 Michael Moore.	Irish.	Irish.	Miner boss.	42	M	Henry Clay.	Northumberland.	Burned by gas.
11 Henry Luckmeyer.	Irish.	Irish.	Miner.	48	S	Henry Clay.	Northumberland.	Burned by gas.
12 Benj. Rodarmel.	American.	American.	Car runner.	23	M	Richards.	Northumberland.	Arm broken by being squeezed by a mule.
13 Benj. Rodarmel.	American.	American.	Bottom man.	23	M	Sioux.	Northumberland.	Crushed between wagons.
14 Albert Pescoe.	American.	American.	Miner.	35	M	Cameron.	Northumberland.	Leg broken by a fall of slate.
15 George Bower.	American.	American.	Miner.	40	M	Luke Fidler.	Northumberland.	Injured by being squeezed between mine cars.
21 John Duffy.	Irish.	Irish.	Miner.	33	M	Hickory Ridge.	Northumberland.	Injured by a fall of coal.
22 Alex. Sucklowsky.	Polish.	Polish.	Miner.	26	S	Pennsylvania.	Northumberland.	Leg broken by a lump of coal rolling on it.
23 David Andrews.	English.	English.	Miner.	42	S	Centralia.	Columbia.	Burned about face and hands by gas.
28 Anth. Godzieskie.	Polish.	Polish.	Miner.	25	M	Natalie.	Northumberland.	Lost both eyes and face and chest injured by premature blast.
28 Felix Gornvinnab.	Russian.	Russian.	Miner.	35	M	Natalie.	Northumberland.	Lost one eye and body badly injured by premature blast.
8 William Williams.	English.	English.	Fireman.	40	M	Royal Oak.	Northumberland.	Badly scalded about face and hand by steam.
29 Alex. Milha.	American.	American.	Miner.	52	M	Hickory Ridge.	Northumberland.	Leg broken by a fall of slate.
30 Charles Belmont.	Polish.	Polish.	Miner.	36	S	Sioux.	Northumberland.	Leg broken by a fall of coal.
31 James Cavanaugh.	American.	American.	Slate picker.	16	S	Cameron.	Dauphin.	Leg broken while wrestling.
31 James Crump.	American.	American.	Miner.	25	M	Williamstown.	Dauphin.	Leg broken by piece of timber.
31 Michael Lark.	Austrian.	Austrian.	Miner.	45	M	Henry Clay.	Northumberland.	Burned by an explosion of gas.
31 Wm. Conches.	Polish.	Polish.	Miner.	41	M	Robinson.	Northumberland.	Leg broken by piece of coal falling from rib.
3 Victor Kinder.	American.	American.	Chute tender.	13	S	Short Mountain.	Dauphin.	Leg broken by being caught in jig shaft.
4 Joseph Augustina.	Austrian.	Austrian.	Breaker m'n.	25	S	Centralia.	Columbia.	Injured by falling from breaker.
4 Richard S. Parnel.	American.	American.	Miner.	35	S	Mt. Carmel.	Northumberland.	Two ribs broken by being caught by battery in chute.
6 Michael McSamara.	American.	American.	Conveyor emp.	17	S	Williamstown.	Dauphin.	Leg broken by being caught in conveyor chain.
6 Steve Ollinskie.	Polish.	Polish.	Helper.	19	S	Henry Clay.	Northumberland.	Head hurt; mule ran away and threw him.
10 William Adams.	American.	American.	Driver.	24	S	Cotts.	Columbia.	Head mangled run over by moss damper.
14 Charles McGill.	Irish.	Irish.	Miner.	28	S	Williamstown.	Dauphin.	Burned about hands, neck and back by gas.

TABLE V—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
27	William Manhart.	American.	Laborer.	21	S.	Locust Gap.	Northumberland.	Collar bone broken; caught between chute and wagon.
3	Joseph Butsua.	Polish.	Miner.	40	M.	Pennsylvania.	Northumberland.	Two fingers blown off by dynamite cap.
4	Frank M. Smith.	American.	Engineer.	29	S.	Bast.	Schuylkill.	Wrist broken by falling from boiler.
5	John Whyelinas.	Polish.	Miner.	29	S.	Richards.	Northumberland.	Fingers mashed; caught between mine cars at bottom of slope.
11	John Petulis.	Lithuanian.	Miner.	40	M.	Centralia.	Columbia.	Seriously burned by gas.
19	Ell Llewellyn.	Welsh.	Carpenter.	39	M.	Bast.	Schuylk II.	Ankle broken between car and guard rail.
20	Otto Boos.	German.	Miner.	35	M.	Colbert.	Northumberland.	Shins injured by fall of chod.
21	Harry Stepp.	American.	Laborer.	21	M.	Colbert.	Northumberland.	Injured back by fall of chod.
24	Peter Homoyock.	American.	Fuelman.	16	M.	Soux.	Northumberland.	Leg broken; caught in drag line.
28	Mike Bideck.	Polish.	Laborer.	35	M.	Soux.	Northumberland.	Burned on face and hands by igniting gas.
10	Famed Levan.	American.	Breaker boss.	37	M.	Hickory Swamp.	Northumberland.	Bruised about body by falling twenty feet in breaker; slipped and fell down elevator.
11	Fredrick Walters.	German.	Starter.	26	M.	Locust Spring.	Northumberland.	Leg broken; caught by rush of coal in chute.
14	Sam Pate.	Italian.	Laborer.	33	M.	Richards.	Northumberland.	Leg fractured by car jumping off track.
15	Frank Zeblosky.	Polish.	Miner.	24	M.	Richards.	Northumberland.	Leg fractured by car jumping off track.
17	Paul Schiele.	American.	Miner.	21	M.	Corbin.	Northumberland.	Burned by gas.
17	Fred Linderman.	American.	Laborer.	35	M.	Corbin.	Northumberland.	Burned by gas.
19	Gas Lyle.	American.	Miner.	49	M.	Ear Valley.	Northumberland.	Leg broken while barring down coal.
22	Henry Fisher.	American.	Miner.	45	M.	Burnside.	Northumberland.	Injured; fell down breast.
24	Joseph Tarascavage.	Polish.	Miner.	35	M.	Lake Peller.	Northumberland.	Injured by premature blast.
30	Alex. Schrock.	American.	Driver.	27	M.	Mulvalley No. 1.	Columbia.	Skull fractured by flying coal from shot.
30	John Schupp.	American.	Miner.	35	M.	Locust Gap.	Northumberland.	Arm broken; bumped between mine cars.
7	Gordon George.	Polish.	Miner.	27	M.	Centralia.	Columbia.	Injured by explosion of percussion cap.
10	John Rehrty.	American.	Miner.	35	M.	Reliance.	Northumberland.	Leg broken by fall of rock.
13	John Wawrey.	American.	Miner.	35	M.	Bast.	Northumberland.	Leg broken by fall of coal.
13	John Wawrey.	American.	Miner.	35	M.	Bast.	Northumberland.	Leg broken by timber falling on him.
14	Levin Kearney.	American.	Miner.	43	M.	Burnside.	Schuylkill.	Leg broken by a fall of coal.
15	Arm. Bismuth.	German.	Miner.	43	M.	Albion.	Northumberland.	Leg broken by a fall of coal.
15	Peter Mals.	American.	Loader.	29	S.	Locust Gap.	Northumberland.	Collar bone broken between mine car and timber.
26	David Paul.	American.	Timberman.	49	M.	Richards.	Northumberland.	Hand broken by a prop falling on it.

Eighth Anthracite District.

SCHUYLKILL COUNTY.

Pottsville, Pa., March —, 1903.

Hon. James W. Latta, Secretary of Internal Affairs:

Sir: In compliance with the act of Assembly, approved June 8, 1901, I herewith submit my annual report for the year 1902.

In addition to the usual tables and statistics, the report contains a brief narrative of all the improvements, worthy of mention, which have been made at each colliery in my district during the year.

The annual examination for mine foreman and assistant mine foreman was held at the court house at Pottsville on April 24 and 25. But one person passed a successful examination—William A. Davis, of Llewellyn, Pa., who was recommended for mine foreman.

Very truly yours,

MICHAEL J. BRENNAN,

Inspector of Mines.

SUMMARY OF STATISTICS FOR 1902.

Number of mines in district,	38
Number of mines in operation during 1902,	38
Number of tons of coal produced,	3,223,387
Number of tons shipped to market,	2,652,972
Number of tons sold at mines to local trade,	60,116
Number of tons consumed at mines in generating steam and heat,	510,299
Number of persons employed inside the mines,	8,241
Number of persons employed outside,	5,125
Number of fatal accidents inside the mines,	17
Number of tons produced for each fatal accident inside,	189,611
Number of persons employed per fatal accident inside,	457

Number of fatal accidents outside,	6
Number of persons employed per fatal accident outside,	854
Number of wives made widows by fatal accidents, ..	10
Number of children orphaned by fatal accidents,	30
Number of non-fatal accidents inside of mines,	46
Number of persons employed per non-fatal accident inside,	179
Number of non-fatal accidents outside,	18
Number of persons employed per non-fatal accident outside,	284 +
Number of steam locomotives used inside,	6
Number of electric motors used inside,	4
Number of fans used for ventilation,	47
Number of gaseous mines in operation during 1902, .	25
Number of non-gaseous mines in operation during 1902,	13
Number of new mines opened in 1902,	4
Number of old mines abandoned during 1902,	1

A. Production of Coal During the Year 1902.

Name of Companies.	Tons.
Philadelphia and Reading,	1,498,473
Lehigh Coal and Navigation,	479,557
Dodson Coal Company,	97,259
Truman M. Dodson Coal Co.,	91,842
St. Clair Coal Company,	316,605
Beddall Bros.,	58,512
C. S. Shindel,	3,950
Dunkelberger & Young,	9,848
Leisenring & Co.,	95,567
Lytle Coal Co.,	103,707
Silverton Coal Company,	30,512
Davis Bros.,	24,130
E. C. White & Co.,	19,272
Mt. Hope Coal Company,	35,474
East Ridge Coal Company,	76,970
Pine Hill Coal Company,	79,308
Losch, Snyder & Co.,	5,228
Gorman Campion,	18,173
Slattery Bros.,	7,244
Joseph H. Deming,	6,767
Butcher Creek Coal Company,	975

Buck Run Coal Company,	41,480
William Cook,	1,517
Stoddard Coal Company,	45,910
Middleport Coal Company,	*
Smith, Myers & Co.,	65,978
Darkwater Coal Company,	8,068
Phillips Bros.,	1,061
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Total,	3,223,387
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*No work done during the year

D. Classification of Non-fatal Accidents for the Year 1902.

	Inside of Mines.										Outside of Mines.							Grand total.							
	By Falls of			By mine cars.	By explosion of gas.	Smothered by gas.	Powder and dynamite.	By blasts, etc.	By Falling Into			Crushed at batteries.	By mules.	Suffocated by coal, etc.	Miscellaneous causes.	Total inside.	My cars.		My machinery.	By suffocation.	By boiler explosions.	Miscellaneous causes.	Total outside.		
	Coal.	Slate.	Roof.						Shafts.	Slopes.	Manways, breasts, etc.														
January.	1		1	1	1								1				2	1	2				3	5	
February.	1																10	1	1				2	10	
March.																	7	1	1				2	9	
April.	3	1									1						8	1	1				2	10	
May.	1																3	1	1				1	4	
June.																								1	1
July.																	1	1	1				1	2	
August.																	1	1	1				1	2	
September.	2																1	2	1				2	4	
October.	2																1	1	1				1	2	
November.	3																7	1	1				1	8	
December.																	1	9	5				4	11	
Totals.	12	1		10	11		1	7			1		1			1	46	9	5				18	64	

E. Occupations of Employees Killed or Fatally Injured Inside and Outside the Mines of the Eighth Anthracite District During 1902.

Months.	Inside.										Outside.											
	Mine foremen.	Assistant Mine foremen.	Fire bosses and assistants.	Miners.	Miners' laborers.	Drivers and runners.	Door-boys and helpers.	Pumpmen.	Company men.	All other employes.	Total inside	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers (boys).	State pickers (men.)	Book-keepers and clerks.	All other employes.	Total outside.	Grand total.	
January.	1			11	1	3		1		1	17									57	6	63
February.	1			11	1	3		1		1	17									57	6	63
March.	1			11	1	3		1		1	17									57	6	63
April.	1			11	1	3		1		1	17									57	6	63
May.	1			11	1	3		1		1	17									57	6	63
June.	1			11	1	3		1		1	17									57	6	63
July.	1			11	1	3		1		1	17									57	6	63
August.	1			11	1	3		1		1	17									57	6	63
September.	1			11	1	3		1		1	17									57	6	63
October.	1			11	1	3		1		1	17									57	6	63
November.	1			11	1	3		1		1	17									57	6	63
December.	1			11	1	3		1		1	17									57	6	63
Totals.	11	1	3	11	1	3		1		1	17			1						57	6	63

G. Nationality of Employees Killed or Fatally Injured Inside and Outside the Mines During 1902.

	Americans.	Germans.	Poles.	Italians.	Slavs.	Lithuanians.	Austrians.
January,	3				1		
February,	1		1				
March,			1		1		1
April,	1	1	1			1	
July,	1						
October,	1						
November,			3	1			
December,	2	1			1		
Totals,	9	2	6	1	3	1	1

H. Nationality of Employees Severely Injured Inside and Outside the Mines During 1902.

	Americans.	English.	Welsh.	Irish.	Germans.	Poles.	Hungarians.	Ukrains.	Slavs.	Lithuanians.	Austrians.	Czechs.
January,	1					3	1					
February,	4				1	5						
March,	4				1	1					2	
April,	1	1	2	2	3	1						
May,	2						1				1	
July,								1				
October,	2											
November,	5		1	1		1	1			1		1
December,	5		1	3		1			1			
Totals,	24	1	4	6	5	11	5	1	2	1		1

I. Giving names of operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each employee per minute in the mines of Eighth Anthracite District for the year 1902.

Names of operators and mines.	Kind of opening.	Gaseous or non-gaseous.	Method of ventilation.	Diameter and width of fan in feet.	Water gauge developed in inches.	Name of fan.	Power used.	Number of air splits of air currents.	Number of cubic feet of air per minute entering the mine at inlet.	Total quantity of air per minute circulating in all the splits in cubic feet.	Number of cubic feet per minute passing out at outlet.	Number of persons employed inside.	Average number of cubic feet per minute provided for each person.
Phil. & Reading Coal & Iron Co.													
West Brookside No. 1 slope.	Slope.	Non-gas.	Fan.	18 x 6	1.6	Gubal.	Steam.	12	14,429	14,429	12,510	901	361
West Brookside No. 2 slope.	Slope.	Non-gas.	Fan.	18 x 6	2.	Gubal.	Steam.	6	52,405	52,405	55,000	55	946
West Brookside No. 3 slope.	Slope.	Gaseous.	Fan.	21 x 7	1.9	Gubal.	Steam.	10	250,692	250,692	261,998	547	280
East Brookside, 2 slopes.	Slope.	Gaseous.	Fan.	18 x 6	1.4	Gubal.	Steam.	8	82,065	82,065	82,060	547	280
Lampin No. 1 slope.	Slope.	Gaseous.	Fan.	12 x 4	1.4	Gubal.	Steam.	8	71,320	71,320	71,372	547	280
Lampin No. 2 slope.	Slope.	Gaseous.	Fan.	18 x 6	1.3	Gubal.	Steam.	4	57,840	57,840	57,840	547	280
Good Spring No. 1.	Slope.	Gaseous.	Fan.	12 x 4	1.3	Gubal.	Steam.	4	31,100	31,100	30,400	330	269
Good Spring No. 2.	Slope.	Gaseous.	Fan.	12 x 4	1.35	Gubal.	Steam.	4	67,400	67,400	67,100	455	262
Otto, West.	Slope.	Gaseous.	Fan.	12 x 4	1.5	Gubal.	Steam.	4	55,100	55,100	57,000	455	262
Otto, White Ash.	Slope.	Gaseous.	Fan.	12 x 4	1.5	Gubal.	Steam.	4	55,100	55,100	57,000	455	262
Phoenix Park No. 2.	Slope.	Gaseous.	Fan.	15 x 5	1.	Gubal.	Steam.	5	108,500	108,500	122,000	283	283
Richardson, abandoned.	Slope.	Gaseous.	Fan.	15 x 5	1.	Gubal.	Steam.	5	108,500	108,500	122,000	283	283
Glendower.	Slope.	Gaseous.	Fan.	18 x 5½	.8	Gubal.	Steam.	8	106,150	106,150	100,225	225	471
Glendower, Traylorville.	Slope.	Gaseous.	Fan.	12 x 4	.8	Gubal.	Steam.	8	106,150	106,150	100,225	225	471
Glendower, Buck Mountain.	Slope.	Gaseous.	Fan.	14 x 5	1.	Gubal.	Steam.	8	106,150	106,150	100,225	225	471
Silver Creek.	Shaft.	Gaseous.	Fan.	12 x 4½	.6	Gubal.	Steam.	15	156,550	156,550	155,525	757	206
Eagle Hill.	Shaft.	Gaseous.	Fan.	21 x 7	1.1	Gubal.	Steam.	7	83,200	83,200	90,000	452	284
Wadesville.	Shaft.	Gaseous.	Fan.	21 x 6.6	1.5	Gubal.	Steam.	7	83,200	83,200	90,000	452	284
Wadesville.	Shaft.	Gaseous.	Fan.	21 x 7	1.	Gubal.	Steam.	10	112,320	112,320	112,320	358	318

* Water was measured at outlet.

Lehigh Coal and Navigation Co. Colliery No. 8, Colliery No. 10, Colliery No. 11, Colliery No. 12.	Drift & shaft, Slope & drift, Shaft, Slope.	Gaseous, Gaseous, Gaseous, Gaseous.	Fan, Fan, Fan, Fan.	25 x 6 14 x 6 24 x 6 20 x 5	2, 1, 1, 1.2	Guibal, Guibal, Guibal, Guibal.	Steam, Steam, Steam, Steam.	4 3 3 3	50,760 51,600 50,000 50,500	90,600 60,200 50,000 50,000	270 270 269 78	213
Dodson Coal Co. Mores.	Slope.	Gaseous.	Fan.	{ 18 x 5 24 x 6 }	1.2 1.1	Guibal.	Steam.	6	42,560	42,580	198	215
Truman M. Dodson, Kaska William.	Shaft.	Gaseous.	Fan.	{ 16 x 4 24 x 6 }	.9 .5	Guibal.	Steam.	9	61,335	61,335	240	263
Buck Run Coal Co. Buck Run.	Slope.	Gaseous.	Fan.	{ 12 x 3.6 15 x 4.4 }	.2 .2	Guibal.	Steam.	4	48,800	48,800	293	240
East Ridge Coal Co. East Ridge colliery.	{ Slope, Drift.	{ Gaseous, Non-gas.	{ Fan, Natural.	{ 12 x 1 12 x 1 }	.25 .25	Guibal.	Steam.	7	41,000	41,000	108	379
Pine Hill Coal Co. Pine Hill colliery.	{ Shaft, Slope, Drift.	{ Gaseous, Gaseous, Gaseous.	{ Fan, Fan, Fan.	{ 20 x 6 16 x 4.6 }	1. .5	Guibal, Guibal, Guibal.	Steam, Steam, Steam.	7 7 7	35,865 35,865 24,000	35,865 35,865 24,000	222 222 270	270
Gorman & Champion, Fall colliery.	Drift.	Non-gas.	Natural.					3	14,500	14,500	33	429
St. Clair Coal Co. St. Clair colliery.	{ Slope, Drift, Shaft.	{ Gaseous, Non-gas, Gaseous.	{ Fan, Fan, Fan.	{ 14 x 5 14 x 5 14 x 5 }	1.5 1.5 1.25	Guibal, Guibal, Guibal.	Steam, Steam, Steam.	7	86,260	86,260	259	332
Beechell Bros. Greenwood No. 12, Dunkelberger & Young.	Drift.	Gaseous.	Fan.	12 x 3.3	1.	Guibal.	Steam.	6	14,455	14,455	100	144
West Lehigh, Leisenring & Co.	Drift.	Non-gas.	Fan.	12 x 4	1.8	Guibal.	Steam.	2	6,500	6,500	25	260
Oak Hill colliery.	{ Shaft, Slope.	{ Gaseous, Gaseous.	{ Fan, Fan.	{ 24 x 8.1 1/2 16 x 4.5 }	1. .8	Guibal, Guibal.	Steam, Steam.	9	99,400	99,400	346	287
Lytell Coal Co. Lytell colliery.	{ Shaft, Slope.	{ Gaseous, Gaseous.	{ Fan, Fan.	{ 20 x 4 18 x 7 }	.2 2.1	Guibal, Guibal.	Steam, Steam.	10	86,314	86,314	490	176
Silverton Coal Co. Silverton colliery.	{ Slope, Slope.	{ Gaseous, Gaseous.	{ Fan, Fan.	{ 16 x 4.6 16 x 4.9 }	1.5 1.25	Guibal, Guibal.	Steam, Steam.	8	52,000	52,000	128	376

List of Improvements for 1902—Philadelphia and Reading Coal and Iron Company.

Lincoln Colliery.—There is a new breaker under course of construction, which, when completed, will have a capacity of 1,800 tons.

A new tail rope has been installed, 2,500 feet long, to the head of No. 1 Slope, to haul the coal to the surface. The old gate landing has been dispensed with; the cars, when landed, run around through tunnel, to the tail rope, which does away with back switching.

There are two pairs of 40"x60" first-motion hoisting engines erected at the water shaft, the drums of which are 20' 8" in diameter, with new water tanks, having a combined capacity of 8,000 gallons. These tanks will dispense with eleven steam pumps.

The Pine Knot shaft was down 225 feet on the 1st of January.

Otto Colliery.—A tunnel has been driven in the Nest Slope, north from White Ash, to White Ash through an anticlinal into the old White Ash basin.

White Ash Slope: A double track plane ninety-one yards long has been driven in No. 59 breast, first lift, West Top Bench of Mammoth Vein. On top of the plane, a double track cross cut has been driven, cutting the bottom bench of Mammoth at a distance of 73 feet.

Phoenix Park No. 3 Colliery.—A tunnel is being driven on the lower level from the Diamond Vein S to the Tracey.

A new plane has been driven 600 feet and completed from No. 16 breast E. Diamond lower level.

Anchor Washery.—Three new tubular boilers have been added to the plant.

Silverton Coal Company.

Two fire box tubular boilers, 150 horse power each, have been added to the plant.

A ten-inch steam line has been laid on the surface, to substitute two 6" and one 3" lines.

A new breaker engine has been installed under the breaker. The position of the former engine was across the road, west of the breaker. The power was transmitted to the breaker by means of ropes, a distance of 170 feet. It is now a belt connection, 45 feet centre.

There have been 328,000 feet of lumber used in remodelling the breaker.

Seven Anthracite Separator Company's patent spiral pickers have been installed.

Dodson Coal Company.

Morea Colliery.—A tunnel has been driven on the east side of the slope at Breast No. 108 from bottom split of Main, cutting the top split of Main at a distance of fifty feet.

Truman M. Dodson Coal Co.

Kaska William.—A new double track slope is now being sunk inside on the south dip, Skidmore vein, in the North Dale basin. It is proposed to sink it to a depth of 300 feet and then tunnel south to the bottom bench of the Mammoth Vein.

The new inside shaft noticed in last year's report, is down 330 feet, cutting the Primrose Vein at this point. It has been extended a distance of 200 feet during the year.

Pine Hill Coal Company.

Pine Hill Shaft has been extended sixty feet during the year.

Buck Run Coal Company.

The new breaker reported last year commenced operations March 12. Its capacity is 1,200 tons per day. A new exhaust fan, fifteen feet diameter, has been installed on the Crosby Vein and one, twelve feet diameter, on the Daniel Vein.

East Lehigh Colliery.

One new fire box tubular boiler, 150 horse power, has been added to the plant.

Lehigh Coal and Navigation Company.

No. 10 Colliery.—A new pump house has been made thirty-five feet from the gangway on the west side of the slope, and a new double-acting Goyne pump, 10" plunger, 4' stroke, 12" column line, installed, to be used in case of high water.

A new pair of 32"x60" first-motion hoisting engines, drum eight feet diameter, have been erected to hoist from the slope. The old engines they replaced having been incapable of performing the work.

Gorman and Campion.

Bell Colliery.—One return tubular boiler has been added to the plant.

Howard Colliery.

One Fire Box tubular boiler, 125 horse power, has been added to the plant.

List of Improvements for 1903.—The St. Clair Coal Company.

The St. Clair Coal Company has installed an electric plant the past year, and has used power both for lighting and hauling coal.

The lighting plant consists of a Hazleton Machinery and Supply Company Engine, belt connected to a general electric multi polar dynamo of 30 Killowatt capacity at 110 volts pressure, running at 1,000 revolutions per minute.

Over 100 24 candle power lamps and 18 G. E. 5 ampere direct current enclosed arc lamps furnish light for the breaker, washery, engine houses, boiler house and offices, doing away with all mine lamps and facilitating the handling of coal to a very marked degree.

The haulage plant was put in operation October 20 last, and is thoroughly up to date in every feature.

A 15"x17" McEwen engine furnishes the motive power to run a 6-pole general electrical 110 Killowatt generator, with its armature direct, connected to the engine shaft, which runs at a speed of 270 revolutions per minute, furnishing power at 250 volts pressure and is over compounded to make up for the losses due to heavy flow of current.

Slate switch boards are used, with the switches, circuit breakers and meters mounted direct on the board.

From the switch board, two circuits are run out. One is carried on poles a distance of two miles to a tunnel and consists of two No. 4-0 feeders, and supplies a G. E. mine locomotive of seven tons, equipped with two G. E. 60 motors of 37 horse power each.

This locomotive has a run of 2,500 feet and is fed by 4-0 trolley wire; the rails are all bounded and used as the return wire to the power house.

The second circuit is of one 4-0 feed wire and one 4-0 return wire and runs to the bottom of a slope, a distance of over 3,000 feet from the power house. At this point, the current is fed to two 4-0 trolleys, which run east and west, about three-fourths of a mile each.

The locomotive that is used in these gangways, is of eight tons weight and equipped with the G. E. 60 motors. Near the point of distribution at this slope, an electric hoist, equipped with a G. E. 55 motor, is used in sinking an inside slope.

All trolley wire used is of the grooved type, and on all the controllers are a special mine controller, which operates the motors either in series or parallel.

Have installed, during the year, four new tubular boilers, 150 horse power each, 18 feet and 72 inches in diameter; also, one pair direct acting 24x60 hoisting engines, for hoisting rock and dirt from breaker up to culm bank.

List of New Collieries, 1902.

The Silver Hill Coal Company.—Has leased a tract of land from P. & R., Bickell, Schall and Replier, one-fourth of a mile south of Middleport, and has commenced operations on the site of the old Nevilles Tunnel.

The Darkwater Coal Company.—Has secured possession of the old Roberts Colliery, at New Castle, which has been idle for some time. They are reopening the water level drift on the Jugular Vein. The Crosby Slope has been retimbered. A new washery has been erected, which has a capacity of 300 tons per day.

The Crystal Run Coal Company.—Has secured the lease of the Altamont No. 2 Mine, which had been abandoned for a period of sixteen years. They have erected a new breaker of 600 tons capacity, and expect to ship coal in the early part of 1903. This colliery is known as the Broad Mountain, and is situated about one mile southeast of the borough of Frackville.

The Black Diamond Coal Company.—Began operations latter part of October, immediately after the strike. The company is sinking a slope upon the Big Tracy Vein, which at the present writing, is down 265 feet. They have also made connection with the Philadelphia and Reading Railroad, and are continuing the extension of track to a point where the breaker and other improvements will be located. This work is now in progress, as well as the foundations for the breaker, which are about complete. The company has purchased the land, but have also a lease for 999 years from David Starr. It is located in Branch and Reilly townships.

List of Collieries Drowned Out During the Strike of 1902.

Lytle Colliery.

Oak Hill Colliery.

Richardson Colliery.

Howard Colliery.

Collieries Abandoned.

Richardson, P. & R.

TABLE 1 Showing names of operators, railroads, etc., and location of collieries in the Eighth Anthracite District for the year 1902.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Phila. & Reading Coal and Iron Co.	Schuylkill	R. C. Luther	Pottsville	John Veith	Pottsville	Philadelphia and Reading.
West Penn.	Schuylkill	R. C. Luther	Pottsville	John Veith	Pottsville	Philadelphia and Reading.
Lehigh	Schuylkill	R. C. Luther	Pottsville	John Veith	Pottsville	Philadelphia and Reading.
Good Springs	Schuylkill	R. C. Luther	Pottsville	John Veith	Pottsville	Philadelphia and Reading.
Otto	Schuylkill	R. C. Luther	Pottsville	John Veith	Pottsville	Philadelphia and Reading.
Phoenix Park No. 1	Schuylkill	R. C. Luther	Pottsville	John Veith	Pottsville	Philadelphia and Reading.
Richards	Schuylkill	R. C. Luther	Pottsville	John Veith	Pottsville	Philadelphia and Reading.
Glenside	Schuylkill	R. C. Luther	Pottsville	John Veith	Pottsville	Philadelphia and Reading.
Silver Creek	Schuylkill	R. C. Luther	Pottsville	John Veith	Pottsville	Philadelphia and Reading.
Engle Hill	Schuylkill	R. C. Luther	Pottsville	John Veith	Pottsville	Philadelphia and Reading.
Wadswale	Schuylkill	R. C. Luther	Pottsville	John Veith	Pottsville	Philadelphia and Reading.
Pope Knot	Schuylkill	R. C. Luther	Pottsville	John Veith	Pottsville	Philadelphia and Reading.
Kadma washery	Schuylkill	R. C. Luther	Pottsville	John Veith	Pottsville	Philadelphia and Reading.
Asner washery	Schuylkill	R. C. Luther	Pottsville	John Veith	Pottsville	Philadelphia and Reading.
Lehigh Coal and Navigation Co.	Schuylkill	W. D. Zehner	Lansford	Baird Snyder, Jr.	Lansford	Central R. R. of N. J.
Colliery No. 10	Schuylkill	W. D. Zehner	Lansford	Baird Snyder, Jr.	Lansford	Central R. R. of N. J.
Colliery No. 11	Schuylkill	W. D. Zehner	Lansford	Baird Snyder, Jr.	Lansford	Central R. R. of N. J.
Colliery No. 12	Schuylkill	W. D. Zehner	Lansford	Baird Snyder, Jr.	Lansford	Central R. R. of N. J.
Madison Coal Co.	Schuylkill	E. L. Bullock	Audenried	W. J. Hays	Morea	Lehigh Valley.
Marica	Schuylkill	E. L. Bullock	Audenried	W. J. Hays	Morea	Lehigh Valley.
Truman M. Dodson	Schuylkill	E. L. Bullock	Audenried	T. C. Reese	Kaska	Philadelphia and Reading.
Kaska-William	Schuylkill	E. L. Bullock	Audenried	T. C. Reese	Kaska	Philadelphia and Reading.
St. Clair	Schuylkill			W. T. Smith	Pottsville	Philadelphia and Reading.
St. Clair Coal Co.	Schuylkill			W. T. Smith	Pottsville	Philadelphia and Reading.
Lehigh Bros.	Schuylkill			M. A. Gerber	Tamaqua	Central R. R. of N. J.
Greenwood No. B.	Schuylkill					Philadelphia and Reading.
Chas. S. Shindler	Schuylkill	E. M. B. Shepp	Tamaqua	John Young	Tamaqua	Philadelphia and Reading.
East Lehigh	Schuylkill					Philadelphia and Reading.
Dunkelberger & Young	Schuylkill					Philadelphia and Reading.
West Lehigh	Schuylkill					Philadelphia and Reading.
Leisenring & Co.	Schuylkill			William Schwenk	Minersville	Philadelphia and Reading.
Oak Hill	Schuylkill					Philadelphia and Reading.

Lytle,	Lytle Coal Co.	Schuylkill, ...	Morris Williams,	Wilkes-Barre, ...	Arthur Kennedy,	Minersville, ...	Pennsylvania.
Silverton,	Silverton Coal Co.	Schuylkill,			T. R. Bowen,	Hewelllyn, ...	Philadelphia and Reading.
Ellsworth,	Davis Bros.	Schuylkill, ...	John H. Davis, ...	St. Clair, ...			Philadelphia and Reading.
Howard,	E. C. White & Co.	Schuylkill,	Richard White, ...	Pottsville, ...			Philadelphia and Reading.
Mt Hope,	Mt. Hope Coal Co.	Schuylkill, ...	S. D. Kynor, ...	Pottsville, ...			Philadelphia and Reading.
East Ridge,	East Ridge Coal Co.	Schuylkill, ...	B. E. Kingsley, ...	Minersville, ...			Philadelphia and Reading.
Pine Hill,	Pine Hill Coal Co.	Schuylkill,			Richard J. Uren, ...	Minersville, ...	Pennsylvania.
Lorberry,	Lesch & Snyder.	Schuylkill, ...	Michael Flanigan,	Tremont, ...	Michael Flanigan,		Philadelphia and Reading.
Bell,	Gorman & Campion.	Schuylkill,			Edward Gorman,	Tuscarora, ...	Philadelphia and Reading.
Tuscarora,	Slattery Bros.	Schuylkill, ...			Daniel Slattery,	Tuscarora, ...	Philadelphia and Reading.
Sebastopol,	Joseph H. Denning,	Schuylkill, ...	Jos. H. Denning,	St. Clair, ...			No railroad.
Jugular,	Butler Creek Coal Co.	Schuylkill,			Jas. J. Whims, ...	St. Clair, ...	Coal hauled to Ellsworth siding P. & R.
Buck Run,	Buck Run Coal Co.	Schuylkill,	Wm. R. Wilson, ...	Minersville, ...			Philadelphia and Reading.
Oakley,	Wm. Cook	Schuylkill, ...	Wm. Cook, ...	Tuscarora, ...			Coal hauled to P. & R. siding at Tuscarora.
Roberts,	Darkwater Coal Co.	Schuylkill, ...	H. K. Myer, ...	Philadelphia, ...	Wm. Yarnall,	Pottsville, ...	Pennsylvania.
Silver Hill,	Phillips Bros.	Schuylkill, ...	David Phillips, ...	Mahanoy City, ...			Coal hauled to P. & R. siding at Middleport.
Stoddart	Stoddart Coal Co.	Schuylkill,			D. H. McGee	Minersville, ...	Philadelphia and Reading.

TABLE 1—Continued.

Names : Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Middleport Coal Co. Middleport washery,*	Schuylkill.			Jas. S. Kearns.	Middleport.	Philadelphia and Reading.
Smith, Myers & Co. Myers washery,	Schuylkill.	Henry Myers.	Minersville.	Chas. Myers.	Pottsville.	

*No work done during the year.

TABLE II—Continued.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employes—tons.	Total production of coal in tons.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Truman M. Dolson Coal Co.	Schuylkill, ...	63,917	27,375	559	91,812	120.7	367	.....	4	975	14,156	34
Kaska-Wilam,	Schuylkill, ...	269,764	45,650	1,791	167,011	142.8	511	4	9	4,578	3,767.5	59
St. Clair,	Schuylkill, ...	269,764	45,650	1,791	144,564	239.2	511	4	9	4,578	3,767.5	59
Washou,	Schuylkill, ...	269,764	45,650	1,791	319,005	191	511	4	9	4,578	3,767.5	59
Totals, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Beddall Bros.	Schuylkill, ...	46,441	2,700	9,371	58,512	179.8	187	1	.....	225	5,000	18
Greenwood No. 12,	Schuylkill, ...	3,700	250	.....	3,550	120.5	50	.....	.....	50	750	6
East Lehigh,	Schuylkill, ...	7,435	442	1,480	9,818	117	5	.....	.....	55	1,400	9
Punkelberger & Young,	Schuylkill, ...	76,228	18,000	1,399	93,567	117.3	177	1	1	1,969	11,277	44
West Lehigh,	Schuylkill, ...	68,800	34,817	1,995	105,707	89.6	729	1	2	1,406	27,679	72
Oak Hill,	Schuylkill, ...	19,337	10,556	292	30,512	98.6	219	1	3	88	10,761	.....
Lytle,	Schuylkill, ...	22,194	1,500	292	24,129	101.6	77	.....	.....	.....	3,000	6
Silverton,	Schuylkill, ...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ellsworth,	Schuylkill, ...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Totals in this column are averages.

Howard,	I. C. White & Co.	Schuylkill,	15,561	3,600	111	19,272	110.6	44	.....	.....	6
Mt. Hope,	Mt. Hope Coal Co.	Schuylkill,	27,545	4,000	3,929	35,474	115	147	1	1,200	14
East Ridge,	East Ridge Coal Co.	Schuylkill,	72,477	4,400	97	76,979	103.7	242	2	1,429	18
Pine Hill,	Pine Hill Coal Co.	Schuylkill,	71,088	6,510	1,110	79,308	124.9	346	1	2,300	19
Lorbery,	Lusch, Snyder & Co.	Schuylkill,	4,299	700	219	5,298	42.4	62	.....	1	4
Bell,	Gorman & Campion.	Schuylkill,	17,934	229	10	18,173	152.9	68	1	400	7
Tuscanora,	Shutery Bros.	Schuylkill,	7,001	175	68	7,244	127	52	.....	200	6
Sebastopol,	Joseph H. Denning.	Schuylkill,	141	560	6,122	6,767	200	28	.....	15	10
Jugular mine,	Fletcher Creek Coal Co.	Schuylkill,	959	12	4	975	12	41	.....	.....	7
Black Run,	Black Run Coal Co.	Schuylkill,	35,422	5,880	178	41,480	82.3	200	.....	2	13
Oakley,	Wm Cook.	Schuylkill,	1,034	90	384	1,517	199	9	.....	70	1
Roberts,	Darkwater Coal Co.	Schuylkill,	7,738	550	.....	8,008	40	142	.....	2	12
Silver Hill,	Philly Bros.	Schuylkill,	872	10	178	1,061	134	22	.....	4	1
Wolf Creek washery,	Shadbert Coal Co.	Schuylkill,	42,558	1,918	494	47,910	137	41	.....	.....	2
Middleport washery,	Middleport Coal Co.	Schuylkill, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Morris washery,	Smith, Morris & Co.	Schuylkill,	61,578	1,000	.....	65,978	201	40	.....	.....	3
Grand totals, .....	.....	.....	2,872,972	410,290	66,146	2,929,387	190	13,382	23	64	53,808
Grand totals,											

* Totals in this column are averages.

TABLE II—Continued.

Names of Operators and Collieries.	County.	Number of Boilers.			Locomotives.			Total horse power.	Number steam engines of all classes.	Total horse power.	Number pumps delivering water to surface.	Capacity in gallons per minute.	Quantity delivered to surface per minute—gallons.	Number electric dynamos.	Number air compressors.	
		Cylindrical.	Horse power.	Tubular.	Horse power.	Steam.	Air.									Electric.
Philadelphia and Reading Coal and Iron Co.,	Schuykill.	140	4,955	93	8,600	17,165	11	165	28,513	31	45,190	28,004	.....	.....	.....
Lehigh Coal and Navigation Co.,	Schuykill.	49	956	40	4,733	5,619	6	67	1,950	9	15,815	6,496	.....	.....	.....
Dodson Coal Co.,	Schuykill.	25	520	15	1,840	2,360	4	20	2,290	4	7,000	2,500	.....	.....	.....
Truman M. Dodson Coal Co.,	Schuykill.	12	1,440	12	1,440	1,440	.....	10	1,380	2	2,350	1,000	.....	.....	.....
Truman Coal Co.,	Schuykill.	16	450	16	2,400	2,850	3	22	1,200	4	1,020	1,600	.....	.....	.....
Beddall Bros.,	Schuykill.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Chas. S. Shirdel,	Schuykill.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dunkleberger & Young,	Schuykill.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Leisinger & Co.,	Schuykill.	20	300	.....	780	1,080	1	9	950	5	3,400	1,550	.....	.....	.....
Lyster Coal Co.,	Schuykill.	.....	.....	.....	4,100	4,100	.....	14	875	.....	.....	.....	.....	.....	.....
Silverton Coal Co.,	Schuykill.	8	480	5	821	1,301	.....	3	338	.....	.....	.....	.....	.....	.....
Davis Bros.,	Schuykill.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
E. C. White & Co.,	Schuykill.	6	180	4	195	270	.....	1	280	.....	.....	.....	.....	.....	.....
Mt. Hope Coal Co.,	Schuykill.	4	80	12	725	875	2	.....	210	1	120	120	.....	.....	.....
East Ridge Coal Co.,	Schuykill.	.....	.....	6	570	570	.....	.....	200	2	500	200	.....	.....	.....
Pine Hill Coal Co.,	Schuykill.	.....	.....	6	400	400	.....	.....	850	1	1,000	600	.....	.....	.....
Joseph, Snyder & Co.,	Schuykill.	.....	.....	4	400	400	.....	.....	118	1	200	150	.....	.....	.....
Lozman & Co.,	Schuykill.	.....	.....	1	80	80	.....	.....	40	.....	.....	.....	.....	.....	.....
Shuman & Co.,	Schuykill.	.....	.....	1	75	75	.....	.....	20	.....	.....	.....	.....	.....	.....
Smith & Brennan,	Schuykill.	1	18	1	15	23	.....	.....	70	.....	.....	.....	.....	.....	.....
Butcher Creek Coal Co.,	Schuykill.	.....	.....	2	90	90	.....	.....	500	.....	.....	.....	.....	.....	.....
Buck Run Coal Co.,	Schuykill.	6	800	.....	800	800	.....	.....	70	1	450	450	.....	.....	.....
Wm. Cook,	Schuykill.	.....	.....	1	45	45	.....	.....	24	.....	.....	.....	.....	.....	.....
Darkwater Coal Co.,	Schuykill.	7	210	.....	90	300	.....	.....	200	1	150	150	.....	.....	.....
Phillips Bros.,	Schuykill.	.....	.....	.....	6	6	.....	.....	4	.....	.....	.....	.....	.....	.....
Stoddart Coal Co.,	Schuykill.	4	64	.....	280	334	.....	.....	248	1	200	200	.....	.....	.....
Middleport Coal Co.,	Schuykill.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Smith, Myers & Co.,	Schuykill.	3	150	.....	150	150	1	.....	200	.....	.....	.....	.....	.....	.....
Grand totals,	.....	233	8,143	277	12,282	21,425	32	4	364	47,913	68	84,963	40,548	3	6

TABLE III—Showing the number of each class of employees at each colliery in the Eighth Anthracite District, during the year 1903.

Names of Operators and Collieries	County.	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.										Grand total inside and outside.
		Mine foremen.	Assistant mine foremen.	Fire bosses and assistants.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	Pumpmen.	Company men.	All other employees.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers (boys).	State pickers (men).	Book-keepers and clerks.	All other employees.	Total outside.	
P. & R. Coal and Iron Co.	Schuylkill.	4	2	11	306	144	66	26	.....	114	228	961	.....	1	16	54	113	22	3	225	438	1,339
West Brooks Co.	Schuylkill.	2	2	4	225	82	23	23	.....	45	164	547	.....	1	11	24	54	11	.....	137	234	801
Green Spring.	Schuylkill.	1	1	1	129	69	10	17	.....	47	79	290	.....	1	7	24	83	12	.....	96	295	555
Otto Spring.	Schuylkill.	1	1	3	207	85	28	11	.....	38	73	475	.....	1	8	25	62	31	.....	105	354	689
Phoenix Park No. 2.	Schuylkill.	1	1	3	160	36	11	5	.....	31	62	283	.....	1	4	9	48	9	.....	63	136	419
Richardson.	Schuylkill.	1	1	4	125	52	15	5	.....	36	48	265	.....	1	5	24	53	19	.....	76	153	312
Glendon.	Schuylkill.	1	1	10	270	115	36	9	.....	50	274	775	.....	1	6	15	53	32	.....	128	311	1,058
Silver Creek.	Schuylkill.	1	1	8	290	103	36	10	.....	48	274	775	.....	1	7	21	45	21	.....	66	174	666
Eacho Hill.	Schuylkill.	1	1	4	187	34	19	11	.....	29	73	308	.....	1	5	21	45	21	.....	66	174	666
Wadsworth.	Schuylkill.	1	1	1	2	54	.....	.....	.....	.....	.....	56	.....	1	3	4	.....	.....	.....	25	33	33
Pine Knot.	Schuylkill.	1	1	1	.....	.....	.....	.....	.....	.....	.....	56	.....	1	3	4	.....	.....	.....	25	33	33
Kelmin washery.	Schuylkill.	1	1	1	.....	.....	.....	.....	.....	.....	.....	56	.....	1	3	4	.....	.....	.....	25	33	33
Andover washery.	Schuylkill.	1	1	1	.....	.....	.....	.....	.....	.....	.....	56	.....	1	3	4	.....	.....	.....	25	33	33
Totals.		15	6	59	1,745	826	242	91	6	448	1,086	4,524	.....	13	83	274	637	252	23	1,219	2,562	7,026
Lehigh Coal and Nav. Co.	Schuylkill.	2	1	7	84	16	24	17	.....	83	136	379	.....	1	5	11	27	21	.....	106	176	566
Colliery No. 8.	Schuylkill.	1	1	2	64	32	11	13	.....	37	108	395	.....	1	6	20	44	18	.....	106	195	500
Colliery No. 10.	Schuylkill.	1	1	4	55	25	11	9	.....	32	114	283	.....	1	6	11	53	15	.....	93	173	402
Colliery No. 11.	Schuylkill.	1	1	1	4	16	12	.....	.....	23	29	78	.....	1	2	11	8	.....	.....	42	64	142
Colliery No. 12.	Schuylkill.	1	1	1	4	16	12	.....	.....	23	29	78	.....	1	2	11	8	.....	.....	42	64	142
Totals.		5	5	17	298	75	83	39	8	268	374	1,022	.....	4	20	58	122	57	.....	247	608	1,630
Truman M. Dodson.	Schuylkill.	1	1	4	50	16	15	6	4	18	76	240	.....	1	2	6	37	15	.....	44	127	267
Kaska-William.	Schuylkill.	1	1	4	50	16	15	6	4	18	76	240	.....	1	2	6	37	15	.....	44	127	267

TABLE III—Continued.

Names of operators and managers.	County.	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.										Grand total inside and outside.
		Mine foremen.	Assistant mine foremen.	Fire bosses and assistants.	Miners.	Miners' laborers.	Levys and runners.	Hoer boys and helpers.	Pumpmen.	Company men.	All other employes.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers (boys).	State pickers (men).	Book-keepers and clerks.	All other employes.	Total outside.	
Dods in Coal Co.	Schuykill.	1	.....	1	73	51	25	3	4	32	7	198	1	1	11	22	46	25	5	138	252	450
Moran.	Schuykill.	2	1	4	141	72	29	13	6	.....	28	259	1	1	19	20	33	6	3	168	352	511
St. Clair Coal Co.	Schuykill.	1	.....	1	38	8	12	2	.....	30	7	100	1	1	5	5	30	1	1	43	87	187
Edgell Bros.	Schuykill.	1	1	.....	10	4	3	.....	.....	.....	.....	19	1	1	2	5	5	.....	2	19	35	54
Charles S. Shindel.	Schuykill.	1	1	1	12	3	7	1	.....	.....	.....	25	1	1	3	4	3	.....	1	17	30	55
Trunkhoffer & Young.	Schuykill.	1	.....	6	221	41	27	8	4	29	.....	346	1	1	6	18	40	2	4	50	131	477
West Lehigh.	Schuykill.	1	1	7	26	79	35	12	.....	39	122	400	1	2	21	37	76	8	7	88	240	720
Leisenring & Co.	Schuykill.	1	.....	5	62	19	18	5	2	27	.....	138	1	1	7	12	9	.....	1	45	76	214
Lytle Coal Co.	Schuykill.	1	1	.....	4	18	5	.....	1	.....	.....	30	1	1	3	3	7	1	1	20	47	77
Silverton Coal Co.	Schuykill.	1	1	.....	4	18	5	.....	1	.....	.....	30	1	1	3	3	7	1	1	20	47	77
Davis Bros.	Schuykill.	1	1	.....	4	18	5	.....	1	.....	.....	30	1	1	3	3	7	1	1	20	47	77
Ellsworth.	Schuykill.	1	1	.....	4	18	5	.....	1	.....	.....	30	1	1	3	3	7	1	1	20	47	77

E. C. White & Co.	Schuylkill, ..	1	.....	4	1	1	2	5	8	1	1	21	40	44							
Howard,	Schuylkill, ..	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mt. Hope Coal Co.	Schuylkill, ..	1	2	.....	6	6	6	.....	.....	.....	.....	.....	.....	.....	
Mt. Hope,	Schuylkill, ..	1	2	.....	6	6	6	.....	.....	.....	.....	.....	.....	.....	
East Ridge Coal Co.	Schuylkill, ..	1	.....	1	43	33	7	.....	.....	.....	.....	.....	.....	.....	
East Ridge,	Schuylkill, ..	1	.....	1	43	33	7	.....	.....	.....	.....	.....	.....	.....	
Pine Hill Coal Co.	Schuylkill, ..	1	2	2	110	28	9	3	2	5	.....	.....	.....	.....				
Pine Hill,	Schuylkill, ..	1	2	2	110	28	9	3	2	5	.....	.....	.....	.....				
Loesch & Snyder,	Schuylkill, ..	1	.....	2	9	20	.....	.....	.....	.....	.....	.....	.....	.....
Larberry,	Schuylkill, ..	1	.....	2	9	20	.....	.....	.....	.....	.....	.....	.....	.....
Coman & Champion,	Schuylkill, ..	1	.....	.....	19	4	3	2	.....	.....	.....	.....	.....	.....		
Bel,	Schuylkill, ..	1	.....	.....	19	4	3	2	.....	.....	.....	.....	.....	.....		
Slattery Bros.	Schuylkill, ..	1	.....	.....	24	6	3	.....	.....	.....	.....	.....	.....	.....	
Tuscarora,	Schuylkill, ..	1	.....	.....	24	6	3	.....	.....	.....	.....	.....	.....	.....	
Joseph H. Denning,	Schuylkill, ..	1	1	.....	3	7	.....	.....	.....	.....	.....	.....	.....	.....
Sebastopol,	Schuylkill, ..	1	1	.....	3	7	.....	.....	.....	.....	.....	.....	.....	.....
Butcher Creek Coal Co.	Schuylkill, ..	1	.....	.....	2	5	2	.....	.....	.....	.....	.....	.....	.....	
Jugular,	Schuylkill, ..	1	.....	.....	2	5	2	.....	.....	.....	.....	.....	.....	.....	
Back Run Coal Co.	Schuylkill, ..	1	.....	.....	2	107	25	7	.....	.....	.....	.....	.....	.....		
Back Run,	Schuylkill, ..	1	.....	.....	2	107	25	7	.....	.....	.....	.....	.....	.....		
William Cook,	Schuylkill, ..	1	.....	.....	3	1	1	.....	.....	.....	.....	.....	.....	.....	
Oakley,	Schuylkill, ..	1	.....	.....	3	1	1	.....	.....	.....	.....	.....	.....	.....	
Linkwater Coal Co.	Schuylkill, ..	1	1	.....	25	60	6	.....	.....	.....	.....	.....	.....	.....	
Roberts,	Schuylkill, ..	1	1	.....	25	60	6	.....	.....	.....	.....	.....	.....	.....	
Phillips Bros.	Schuylkill, ..	1	.....	.....	4	4	1	.....	.....	.....	.....	.....	.....	.....	
Silver Hill,	Schuylkill, ..	1	.....	.....	4	4	1	.....	.....	.....	.....	.....	.....	.....	
Stoddard Coal Co.	Schuylkill, ..	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wolf Creek washery,	Schuylkill, ..	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Middleport Coal Co.	Schuylkill, ..	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Middleport washery,	Schuylkill, ..	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Smith, Myers & Co.	Schuylkill, ..	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Myers washery,	Schuylkill, ..	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grand totals,	Schuylkill, ..	44	22	112	3,125	1,405	547	186	47	923	1,556	8,241	23	43	224	574	1,220	435	67	2,556	5,142	13,282

TABLE III.—Continued.

Names of Operators and Collieries.		Number of Days Worked Each Month in Breaker.												County.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Philadelphia and Reading Coal and Iron Co.,	Schuylkill.	20.27	20.38	19.46	21.88	2.16	.....	.....	68	3.40	5.27	11.05	21.06	152.4
Lehigh Coal and Navigation Co.,	Schuylkill.	17.5	15.3	15.28	19.16	6.86	.....	1.57	5.85	5.77	9.35	21.67	28.4	137.3
Trumac Coal Co.,	Schuylkill.	20.7	19.7	18.7	18.16	6	.....	.....	.....	.....	10	21.1	21.8	137
Dominey Coal Co.,	Schuylkill.	11.3	19.5	16.2	8.2	.....	.....	.....	.....	.....	5.1	21.3	21.8	106.5
St. Clair Coal Co.,	Schuylkill.	21.2	18.3	21.1	22.9	9	.....	21	27.4	25.6	28.4	23.4	20.8	239.2
Easton Coal Co.,	Schuylkill.	22.6	19.4	20	21.7	8.1	.....	.....	.....	11.6	23.1	21.6	22.7	170.8
Charles B. Shubel,	Schuylkill.	.....	9.3	21	19.2	9	.....	.....	.....	.....	17	29	22	120.5
Dunkleberger & Young,	Schuylkill.	24	20	21	16	10	.....	.....	.....	.....	15	20	21	117
Lessenberger & Co.,	Schuylkill.	16.3	20.6	19.9	21.3	6.7	.....	.....	.....	.....	.....	17.2	15.3	117.3
Lyle Coal Co.,	Schuylkill.	19.3	17.7	16.3	18.2	5.5	.....	.....	.....	.....	5.7	18.6	21.2	89.6
Silverton Coal Co.,	Schuylkill.	3.1	14.6	16.6	18.7	.....	.....	.....	.....	.....	.....	.....	21.2	98.6
E. C. White & Co.,	Schuylkill.	24.8	22.5	24	23.8	9	.....	.....	.....	.....	8	24	23.2	111.6
East Hope Coal Co.,	Schuylkill.	3.6	15.3	14.1	20.7	7.1	.....	.....	.....	.....	7	20	17	115
East Ridge Coal Co.,	Schuylkill.	15	11	16	21	8	.....	.....	.....	.....	6.6	18.9	16.6	103.1
Pine Hill Coal Co.,	Schuylkill.	13.4	12.6	14.6	16	5	.....	.....	.....	.....	4.7	22.7	21.7	121.9
Lasch & Snyder,	Schuylkill.	19.4	17.7	17.9	17	4.5	.....	.....	.....	.....	4.1	22.7	21.6	129.9
Gorman & Champion,	Schuylkill.	22.4	22.5	21	21.3	6.7	.....	.....	.....	.....	.....	21.8	20.4	129.7
Shattory Bros.,	Schuylkill.	17.6	15	15	16.2	6.9	.....	.....	.....	.....	.....	23	23	260
Joseph H. Downing,	Schuylkill.	21	20	21	21	21	20	21	23	22	23	23	13	12
Bank Run Coal Co.,	Schuylkill.	.....	.....	9.1	20.2	5.7	.....	.....	.....	.....	6.1	19.1	22.1	82.2
William Cook,	Schuylkill.	13	13	10	11	4	.....	.....	.....	10	13	13	12	91
Backwater Coal Co.,	Schuylkill.	7	.....	.....	.....	.....	.....	.....	.....	.....	7	24	18	56
Phillips Bros.,	Schuylkill.	.....	.....	.....	.....	.....	.....	.....	.....	24	27	26	27	104
Stoddart Coal Co.,	Schuylkill.	20.4	17.5	26.6	22	7.6	.....	.....	.....	.....	5.6	22.1	21	137
Middleport Coal Co.,	Schuylkill.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Smith, Myers & Co.,	Schuylkill.	15	12	9	21	20	.....	3	23	21	26	17	28	201

TABLE IV—List of fatal accidents that occurred in and about the mines of the Eighth Anthracite District for the year ending December 31, 1902.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of Widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan. 18	Michael Adams.	Slav.	Miner.	44	M.	1	4	St. Clair.	Schuylkill.	Killed by fall of rock.
21	Ben. Rosenberger.	American.	Miner.	42	M.	1	8	Steverson.	Schuylkill.	Killed by fall of slate.
24	Cyrus Miller.	American.	Driver.	41	M.	1	1	Ball.	Schuylkill.	Fatally injured by being caught between car and prop.
29	Jas. Cannon.	American.	Exp. man.	17	M.	1	1	Lytle.	Schuylkill.	Killed by being caught in cog wheels of elevators.
Feb. 1	Thos. J. Ryan.	American.	Laborer.	17	M.	1	1	East Ridge.	Schuylkill.	Fatally injured by premature blast. Died March 26.
27	Michl. Leko.	Pole.	Laborer.	55	M.	1	1	St. Clair.	Schuylkill.	Killed by fall of slate.
15	Jos. Kalchauer.	Slav.	Laborer.	55	M.	1	1	St. Clair.	Schuylkill.	Killed by fall of slate.
24	Con. Dalphus.	Austrian.	Miner.	45	M.	1	7	Oak Hill.	Schuylkill.	Fatally injured by premature blast. Died March 26.
27	Mart. Barniss.	Pole.	Miner.	21	M.	1	1	Pine Hill.	Schuylkill.	Killed by fall of slate.
10	Barney Fuertus.	Pole.	Laborer.	55	M.	1	1	Silver Creek.	Schuylkill.	Fatally injured by explosion of gas. Died April 10.
19	Chas. Rinkel.	Lithuanian.	Miner.	46	M.	1	6	Phoenix Park.	Schuylkill.	Killed by fall of slate.
11	Wm. Heffdingger.	American.	Miner.	29	M.	1	1	Colliery No. 10.	Schuylkill.	Killed by fall of slate.
20	Wm. Brode.	German.	Miner.	28	M.	1	1	Colliery No. 8.	Schuylkill.	Killed by fall of slate.
2	John Doyle.	American.	Asst. carp.	17	M.	1	1	St. Clair.	Schuylkill.	Killed by being run over by car at breaker.
28	Ed. Thomas.	Welsh.	Retainman.	27	M.	1	1	St. Clair.	Schuylkill.	Killed by being run over by mine cars.
8	Arch. Pcharski.	Pole.	Miner.	42	M.	1	1	Silver Creek.	Schuylkill.	Fatally injured by fall of slate.
26	Ed. Polman.	Pole.	Miner.	48	M.	1	3	Silver Creek.	Schuylkill.	Fatally injured by fall of coal; died same day.
24	Jos. Gray.	Pole.	Miner.	50	M.	1	1	Silver Creek.	Schuylkill.	Fatally injured by fall of coal; died same day.
25	Thos. Mitchell.	Italian.	L. o. helper.	26	M.	1	1	St. Clair.	Schuylkill.	Fatally injured; caught between car and locomotive.
6	Eug. Sullivan.	American.	Lifter.	18	M.	1	1	Wadsworth.	Schuylkill.	Fatally injured; stepped under mine car while attempting to get on.
12	Paul Arner.	American.	Driver.	17	M.	1	1	Groeswood.	Schuylkill.	Killed by being caught between gangway and mine car.
18	John Sinks.	Slav.	Laborer.	56	M.	1	1	East Ridge.	Schuylkill.	Fatally injured; struck by tension wheel of tram line.
21	Jacob Kibart.	German.	Miner.	57	M.	1	1	Colliery No. 11.	Schuylkill.	Killed; struck by piece of coal rolling from top of stripping.

TABLE V.—List of non-fatal accidents that occurred in and about the mines of the Eighth Anthracite District for the year ending December 31, 1902.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan.	1 John Battick,	Pole,	Pumpman,	28	M.	Morea,	Schuylkill,	Arm broken while repairing pump.
	2 Mich. Joebry,	Pole,	Driver,	17	S.	St. Clair,	Schuylkill,	Leg injured; caught between cars.
	10 John Wendling,	American,	Laborer,	29	S.	Laborer,	Schuylkill,	Hand mangled; caught in cog wheels.
	25 Luke Redding,	Hungarian,	Jig runner,	34	S.	St. Clair,	Schuylkill,	Leg broken; stepped into jig.
Feb.	28 Jos. Mochitus,	Pole,	Miner,	44	M.	Lytle,	Schuylkill,	Head and body injured by coal bursting out of face of chute.
	8 Mac. McLavage,	Pole,	Miner,	25	S.	Silver Creek,	Schuylkill,	Injured by fall of coal.
	12 Edgar McGeary,	American,	Driver,	19	S.	Lytle,	Schuylkill,	Injured; caught on side of car.
	13 Thomas Farrell,	American,	Miner,	36	S.	Pine Hill,	Schuylkill,	Burned by explosion of gas.
March	10 Chas. Brennan,	American,	Miner,	41	M.	Pine Hill,	Schuylkill,	Burned by explosion of gas.
	17 Christ. Long,	American,	Misc.,	35	M.	Lincoln,	Schuylkill,	Arm broken; struck by piece of coal from blast.
	20 Adam Lachoski,	Pole,	Miner,	39	M.	Eagle Hill,	Schuylkill,	Burned by explosion of gas.
	21 Simon Teuber,	German,	Miner,	40	M.	Colliery No. 10,	Schuylkill,	Burned by explosion of gas.
March	28 Jos. Cwetus,	Pole,	Miner,	39	M.	Morea,	Schuylkill,	Leg injured; attempted to cross between cars.
	28 Jos. Pongzeches,	Pole,	Miner,	29	S.	Silver Creek,	Schuylkill,	Burned by explosion of gas.
	30 And. Kosobski,	Pole,	Laborer,	26	S.	Silver Creek,	Schuylkill,	Burned by explosion of gas.
	31 John Vost,	German,	Engineer,	21	S.	Eagle Hill,	Schuylkill,	Injured by being thrown into fly wheel pit.
April	5 John Hoke,	American,	Miner,	42	S.	Oak Hill,	Schuylkill,	Hip dislocated by fall of coal.
	12 Ben. Simmons,	American,	Miner,	33	M.	St. Clair,	Schuylkill,	Burned by explosion of gas.
	12 Jos. Walschick,	Pole,	Laborer,	33	M.	St. Clair,	Schuylkill,	Burned by explosion of gas.
	15 John Wallushick,	Austrian,	Laborer,	32	S.	St. Clair,	Schuylkill,	Leg broken while unhooking chains from car.
April	24 Jos. Imahorun,	Austrian,	Miner,	24	S.	Pine Hill,	Schuylkill,	Arm broken; premature explosion of blast.
	24 Thomas McDaniel,	American,	Laborer,	20	S.	Colliery No. 8,	Schuylkill,	Leg injured between cars.
	25 John Kellie,	Hungarian,	Laborer,	23	M.	Silverton,	Schuylkill,	Leg injured by car.
	28 Hamp Horan,	American,	Leader,	36	S.	Buck Run,	Schuylkill,	Two mangled by coal rolling down slope.
April	3 Mich. Jenschut,	Hungarian,	Laborer,	44	S.	Mt. Hope,	Schuylkill,	Leg broken by dumper falling on him.
	7 Frk. Guenther,	German,	Laborer,	19	S.	Silverton,	Schuylkill,	Leg injured by being caught in shaft of wheel.
	22 Jas. Lised,	Welsh,	Miner,	38	M.	Eagle Hill,	Schuylkill,	Hip dislocated by fall of coal.
	25 Paul Rodgers,	Irish,	Miner,	35	M.	Colliery No. 11,	Schuylkill,	Burned by explosion of gas.

15	Mich. Burns,	Irish,	Miner,	40	S. Colliery No. 11,	Schuylkill,	Burned by explosion of gas.
16	Lea Rumph,	German,	Miner,	28	M. Otto,	Schuylkill,	Leg broken by fall of coal.
21	John Wood,	English,	Footman,	25	S. St. Clair,	Schuylkill,	Leg broken by being caught between empty cars.
25	Pat. Dougherty,	American,	Loader,	21	S. Kaska William,	Schuylkill,	Body injured by falling down chute.
28	Law. Jones,	Welsh,	Miner,	47	M. Colliery No. 8,	Schuylkill,	Ankle and four ribs broken by fall of coal.
30	Peter Sheaffer,	German,	Miner,	55	M. Brookside,	Schuylkill,	Head injured by fall of coal.
31	Jos. Wagner,	American,	Miner,	45	M. Good Spring,	Schuylkill,	Face and chest injured by premature explosion of blast.
2	Pet. Gallagher,	Hungarian,	Miner,	27	M. Eagle Hill,	Schuylkill,	Burned by explosion of gas.
6	John O'Neill,	American,	Miner,	40	M. Kaska William,	Schuylkill,	Leg broken by piece of coal rolling on it from the gob.
19	Jos. Stelso,	Austrian,	Tip man,	22	S. Kaska William,	Schuylkill,	Arm broken by falling from breaker trestle.
2	Anth. Heaton,	Italian,	Laborer,	19	S. St. Clair,	Schuylkill,	Leg torn off; caught between wheels of railroad car.
4	Hen. E. Smith,	American,	Laborer,	44	M. Brookside,	Schuylkill,	Foot mashed between cars.
30	Har. Kotte,	American,	Loader,	19	S. Lincoln,	Schuylkill,	Injured between car and chute.
3	Harry Mease,	American,	Driver,	28	M. Lincoln,	Schuylkill,	Leg broken; bumped between car and mule.
5	Chas. Tobias,	American,	State picker,	15	S. Silvertown,	Schuylkill,	Legs broken; fell on line shaft of coal cars.
5	Geo. Jubin,	Hungarian,	Laborer,	33	M. Morea,	Schuylkill,	Confusion of head; struck by dumper on striking.
12	Peter Brady,	American,	Pumpman,	22	S. St. Clair,	Schuylkill,	Leg broken; struck by piece of lumber.
15	Wm. Conscavage,	Pole,	Miner,	27	S. Colliery No. 12,	Schuylkill,	Fingers blown off by premature explosion of blast.
17	Emil Zembiarzi,	Tyrolese,	Miner,	32	S. Otto,	Schuylkill,	Arm broken by explosion of blast.
19	Wm. H. James,	Welsh,	Miner,	31	S. Pine Hill,	Schuylkill,	Body badly bruised; back supposed fractured; struck by fall of coal.
19	Irvin Gist,	American,	Laborer,	19	S. Brookside,	Schuylkill,	Arm broken; while riding on car. It jumped the track, throwing him on rail.
25	Prk. Boywich,	Lithuanian,	Laborer,	27	M. Kaska William,	Schuylkill,	Collar bone broken; struck by mine car.
25	Mich. Madka,	Slav,	Miner,	55	S. St. Clair,	Schuylkill,	Head and leg injured by fall of coal and mine.
27	Harry Williams,	American,	Laborer,	18	S. Darkwater,	Schuylkill,	Foot injured while walking on rail.
29	Rob. Walters,	Irish,	Miner,	42	M. Brookside,	Schuylkill,	Arm broken; struck by hammer in hands of partner.
1	John Sonvka,	Slav,	Laborer,	25	S. Morea,	Schuylkill,	Leg bruised; struck by car turning over on him.
1	John R. Brennan,	Irish,	Miner,	48	M. East Ridge,	Schuylkill,	Face and head cut; struck by coal from blast.
1	James Curran,	Irish,	Miner,	31	M. East Ridge,	Schuylkill,	Face and head cut; struck by coal from blast.
3	John Farrell,	Irish,	Miner,	32	M. Good Spring,	Schuylkill,	Face and hands burned by explosion of powder in keg.
3	Irvine Rupp,	American,	Laborer,	19	S. Brookside,	Schuylkill,	Leg broken; attempted to get on mine locomotive while it was in motion.
6	Wm. Kramer,	American,	Laborer,	45	M. Brookside,	Schuylkill,	Fingers mashed while unloading oil barrel from truck.
21	John Sorablie,	Pole,	Miner,	26	S. Silver Creek,	Schuylkill,	Body injured and leg fractured by fall of coal.

Dec.

TABLE V—Continued.

Date of accident.	Name of Person	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Dec. 22	Jeremiah Mahon, Jr.	American.	Miner.	24	M.	Parkwater.	Schuykill.	Cut on wrist by fall of coal.
22	Thos. R. Jones.	Welsh.	Miner.	26	M.	Buck Run.	Schuykill.	Arm broken; caught between mine car and timber at head of slope.
24	Jonathan Troutman.	American.	Refrigerator.	46	M.	Brookside.	Schuykill.	Leg broken; struck by piece of coal rolling down slope.
26	And. Hentz.	American.	Laborer.	25	S.	Good Spring.	Schuykill.	Arm caught between locomotive and mine car.

First Bituminous District.

ALLEGHENY, FAYETTE, WASHINGTON, WESTMORELAND AND
GREENE COUNTIES.

Monongahela, Pa., March 31, 1903.

Hon. James W. Latta, Secretary of Internal Affairs:

Sir: I have the honor to submit herewith my annual report as Inspector of Mines for the First Bituminous District, for the year ending December 31, 1902.

Two new mines have been opened and one abandoned since my last report.

The total production of coal for the year, as reported by the operators, shows 10,980,533 tons, being an increase of 2,871,875 tons over that of the previous year.

Two hundred and forty-six accidents occurred in and about the mines; sixty-six of which proved fatal.

By these accidents, thirty-nine wives were made widows and eighty-seven children fatherless.

In the body of the report the condition of each mine district is described.

A marked increase in the sanitary condition of the mines was shown in the examinations made.

The usual tables accompany this report, together with others of interest, to which the reader is referred.

Respectfully submitted,

HENRY LOUTTIT,

Inspector of Mines.

Summary of Statistics for 1902.

Number of mines in district,	87
Number of mines in operation during 1902,	73
Number of tons of coal produced,	10,980,533
Number of tons shipped to market,	10,773,732
Number of tons sold at mines to local trade,	53,302

Number of tons consumed at mines in generating steam and heat,	153,499
Number of tons produced by pick mining,	2,487,349
Number of tons produced by compressed air machines, ..	1,693,920
Number of tons produced by electrical machines,	6,799,264
Number of persons employed inside the mines,	10,592
Number of persons employed outside,	1,540
Number of fatal accidents inside the mines,	63
Number of tons produced for each fatal accident inside, ..	174,294
Number of persons employed per fatal accident inside, ..	192
Number of fatal accidents outside,	3
Number of persons employed per fatal accident outside, ..	4,044
Number of wives made widows by fatal accidents,	39
Number of children orphaned by fatal accidents,	87
Number of non-fatal accidents inside of mines,	176
Number of persons employed per non-fatal accident inside, ..	68
Number of non-fatal accidents outside,	4
Number of persons employed per non-fatal accident outside, ..	3,033
Number of electric motors used inside,	42
Number of fans used for ventilation,	58
Number of furnaces used for ventilation,	25
Number of gaseous mines in operation during 1902,	50
Number of non-gaseous mines in operation during 1902, ..	23
Number of new mines opened in 1902,	2
Number of old mines abandoned during 1902,	1

A. Production of Coal During the Year 1902.

Names of Companies.	Tons.
M. R. C. C. and C. Co.,	4,172,544
Pittsburg Coal Co.,	2,223,130
Vesta Coal Co.,	1,465,179
James W. Ellsworth & Co.,	618,934
Manufacturers' and Consumers' Coal Co.,	361,315
C. Jutte & Co.,	329,563
Charleroi Coal Co.,	268,881
United Coal Co.,	235,476
Hazel Kirk Gas Coal Co.,	211,391
Schoenberger Gas Coal Co.,	205,180
Clyde Coal Co.,	145,136
Stockdale Coal Co.,	137,760

Henderson Coal Co.,	133,353
A. R. Budd,	122,108
Crescent Coal Co.,	109,798
Star Coal Co.,	101,500
Bunola Mining Co.,	40,817
Dilworth Coal Co.,	36,400
People's Coal Co.,	27,691
W. H. Flint & Co.,	22,747
Domestic Coal Co.,	10,675
Dunkirk Coal Co.,	955

Coal production by counties:

Washington county,	6,159,948
Fayette county,	1,902,177
Allegheny county,	1,825,336
Westmoreland county,	1,056,672
Greene county,	36,400

Number of tons produced per employe, 905.08.

Total,	10,980,533
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B. Showing the number of fatal and non-fatal accidents inside and outside the mines; number of tons of coal produced per fatal and non-fatal accident inside the mines; number of persons employed inside and outside; and the number employed inside and outside for every fatal and non-fatal accident for each company during 1902.

Names of Companies.	Number of lives lost inside.	Number of lives lost outside.	Total number of lives lost.	Number severely injured inside.	Number severely injured outside.	Total number severely injured.	Tons of coal produced per each life lost inside.	Tons of coal produced per serious injury inside.	Number employees inside of mines.	Number employees outside of mines.	Total number employed.	Number of employees inside for each life lost.	Number of employees inside for each severe injury.	Number of employees outside for each life lost.	Number of employees outside for each severe injury.
Mazonabeta River Consolidated Coal and Coke Co.	26		26	26		26	160 432	50 271	4 383	577	4 960	168	52		58
Pittsburgh Coal Co.	10	1	11	11	4	15	233 130	57 035	24	500	236	26	52	30	10
Charleston Coal Co.	5	3	8	8	4	12	268 881	67 229	538	124	252	228	57	62	121
James W. Ellsworth & Co.	2		2	2		2	3 467	218 419	1 821	124	415	260	174		
West Virginia Coal Co.	2		2	2		2	1 000 241	291 453	1 505	13	1 522	132	215		
Clayton Coal Co.	2		2	2		2	1 000 241	291 453	1 505	13	1 522	132	215		
Hazen Coal Co.	1		1	1		1	105 695	32 231	100	13	176	80	26		
Schenck Coal Co.	1		1	1		1	265 180	322 747	199	29	228	159	139		
Schenck Coal Co.	1		1	1		1	145 146	115 135	141	21	162	111	141		
Clyde Coal Co.	1		1	1		1	137 796	26 409	65	36	136	122	63		
Liberty Coal Co.	1		1	1		1	133 333	65 676	21	9	20	112	56		
Sheldahl Coal Co.	1		1	1		1			112	11	123	112	56		
Democrat Coal Co.	1		1	1		1			72	13	65				
W. H. Flint & Co.	1		1	1		1			125	13	138				
Star Coal Co.	1		1	1		1	122 198	50 750	211	19	230	211	62		
A. R. Budd.	1		1	1		1	149 798	64 899	112	16	128	112	56		
Present Coal Co.	2		2	2		2	117 738		169	21	190	84			
United Coal Co.	4		4	4		4	30 328		14	9	23				
Marquette Coal Co.	4		4	4		4		15 161	14	44	400	104	52		
Manufacturers and Consumers' Coal Co.	4		4	4		4		27 651	106	18	124		106		
Piedmont Coal Co.	4		4	4		4			106	18	124		106		
Totals and averages.	63	3	66	176	4	180	2 448 221	1 451 350	10 792	1 560	12 132	2 382	1 649	302	438

C. Classification of Fatal Accidents for the Year 1902.

	Inside of Mines.										Outside of Mines.										Grand total.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
	By Falls of			By mine cars.	By explosion of gas.	Smothered by gas.	Powder and dynamite.	By blasts, etc.	By Falling into					Total inside.	By cars.	By machinery.	By suffocation.	By boiler explosions.	Miscellaneous causes.	Total outside.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
	Coal.	Slate.	Roof.						Shafts.	Slopes.	Manways, breaks, etc.	Crushed at batteries.	By mules.									Suffocated by coal, etc.	Miscellaneous causes.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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F. Occupations of Employees Severely Injured Inside and Outside the Mines of the First Bituminous District During 1902.

Months	Inside.										Outside.										Grand total.
	Mine foremen.	Assistant mine foremen.	Fire bosses.	Miners.	Machine runners.	Machine loaders.	Machine scrapers.	Drivers and runners.	Door boys and helpers.	Company men.	All other employees.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	Coke employees.	Book-keepers and clerks.	All other employees.	Total outside.	
January.	1			14	2		1	1	1	1		6								1	16
February.				10	1					3		10									16
March.				13	1		1					15									15
April.				11						1		12								1	13
May.				11								11									11
June.			1	11								12									13
July.				11						1		12			1					1	13
August.	1			12	1	1	1	1		1		16								1	17
September.				11				1				12									23
October.				9	2			1	1	1		14								1	15
November.				9					1	1		11									14
December.								4	1	1		6									11
Totals.	1	2	1	130	6	1	5	20	2	3		176			1				3	4	180

G. Nationality of Employees Killed or Fatally Injured Inside and Outside the Mines During 1902.

	Americans.	English.	Welsh.	Scotch.	German.	Poles.	Hungarians.	Italians.	Slavs.	Lithuanians.	Austrians.	Russians.	French.	Finn.	Grand total.
January,								3	1			1	1		6
February,					1		1								2
March,	1	1		1			1		1						4
April,								1							1
May,						1	1		1			1		1	5
June,	3						3	12	1					1	18
July,		1			1	1	1		1		3				10
August,	1	1													2
September,			1						1	1					3
October,	1	1				1			12		12				26
November,							1					2			3
December,	3						1								4
Totals,	10	7	1	1	2	4	5	8	11	1	5	5	1	2	66

H. Nationality of Employees Severely Injured Inside and Outside the Mines During 1902.

	Americans.	English.	Welsh.	Scotch.	Irish.	German.	Poles.	Hungarians.	Italians.	Slavs.	Lithuanians.	Austrians.	Russians.	French.	Finn.	Grand total.
January,	6					2	3	2	1	1			2			23
February,	3	1	1						3	3						9
March,	3	3					3		3			2			1	16
April,	3							5	3	4	1					16
May,	3		1			1	1	3	3	4			1			15
June,	3	1			1			3	1	4		1			1	18
July,	3			2			2	3	4	4						13
August,	3	1				1	1	1	2	5		1				17
September,	3	3					3	2		5			1			19
October,	3					2	1		3	2						8
November,								12	3	1						15
December,			2			1			4	2			1		1	11
Totals,	41	9	1	5	1	7	17	20	24	36	1	5	4	2	2	180

L. Giving names of operators and mines, kind of openings, type and size of fans; size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each employee per minute in the mines of First Bituminous District for the year 1902.

Names of Operators and Mines.														
Monongahela River Consolidated Coal and Coke Co.														
Alto Hays.														
Kind of opening.	Gaseous or non gaseous.	Method of ventilation.	Diameter and width of fan in feet.	Water gauge developed in inches.	Name of fan.	Power used.	Area of furnace bars in square feet.	Number of air splits of air currents.	Number of cubic feet of air per minute entering the mine at inlet.	Total quantity of air per minute circulating in all the splits in cubic feet.	Number of cubic feet per minute passing out at outlet.	Number of persons employed inside.	Average number of cubic feet per minute provided for each person.	
Drift.	Gaseous.	Furnace.	6 x 18		Robinson.	Steam.	45		27,000	26,200	39,000	200	135	
Drift.	Gaseous.	Fan.	5 x 16		Pollock.	Steam.			36,000	13,500	56,000	42	857	
Drift.	Gaseous.	Fan.	6 x 20		Seranton.	Steam.								
Slope.	Gaseous.	Fan.	4 x 14		Cole.	Steam.		4	28,800	30,480	39,600	151	190	
Drift.	Non-gas.	Furnace.			Capell.	Steam.	42		65,800	20,910	56,000	142	463	
Drift.	Gaseous.	Fan.	4 x 9.4		Irwini.	Steam.			52,200	40,000	47,000	143	372	
Drift.	Gaseous.	Fan.	6.4 x 16		Pollock.	Steam.		1	45,000	35,650	47,000	143	314	
Drift.	Gaseous.	Furnace.					64							
Drift.	Gaseous.	Fan.	5 x 10		Brazil.				14,000	15,210	18,000	137	102	
Slope.	Non-gas.	Fan.							34,400	12,800	36,000	124	277	
Drift.	Gaseous.	Fan.	5 x 18		Pollock.	Steam.			44,270	26,380	60,000	132	336	
Drift.	Gaseous.	Fan.	5 x 16		Vulcan.	Steam.			48,000	38,500	50,000	149	345	
Drift.	Non-gas.	Furnace.	7 x 20		Pollock.	Steam.			57,600	10,210	54,000	130	443	
Drift.	Gaseous.	Fan.	8.5 x 20		Pollock.	Steam.	52		22,020	12,000	21,000	95	231	
Slope.	Gaseous.	Fan.	7.6 x 19		Vulcan.	Steam.			35,000	26,200	54,000	181	193	
Drift.	Gaseous.	Fan.	7 x 20		Pollock.	Steam.			39,980	27,000	57,000	125	296	
Drift.	Gaseous.	Fan.	6.6 x 20		Pollock.	Steam.			44,100	38,700	64,000	118	372	
Drift.	Gaseous.	Fan.	7 x 20		Pollock.	Steam.			61,500	32,500	60,000	130	408	
Drift.	Gaseous.	Furnace.												
Drift.	Non-gas.	Fan.	6 x 20		Seranton.	Steam.								
Drift.	Non-gas.	Fan.	1.6 x 6		Cole.	Steam.								

Rock Run,	Drift,	Non-gas,	Furnace,	6 6 x 20	Pollock,	40	3	20,360	22,760	35,000	115	182
Risher,	Drift,	Non-gas,	Fan,	6 6 x 20	Pollock,	16	2	13,000	7,000	25,000	15	906
Rostover,	Drift,	Non-gas,	Furnace,	6 6 x 20	Pollock,	16	2	10,250	9,200	15,500	68	150
Riversville,	Drift,	Non-gas,	Furnace,	4 6 x 16	Robinson,	3	3	42,140	19,520	35,300	154	273
Tremont,	Slope,	Gasous,	Fan,	8 8 x 25	Pollock,	120		48,000	15,500	35,000	100	300
Wadant,	Drift,	Gasous,	Furnace,	9 8 x 25	Robinson,	5		77,500	53,500	78,500	132	587
Went, Upper and Lower,*	Drift,	Gasous,	Fan,	6 8 x 18	Pollock,	4	4	70,400	38,000	78,000	116	006
	Drift,	Gasous,	Fan,	7 8 x 20	Brazil,	2	2	41,650	30,580	40,350	107	580
	Drift,	Gasous,	Furnace,	4 6 x 16	Pollock,	25		20,000	11,000	37,000	39	205
	Drift,	Gasous,	Fan,	4 6 x 16	Clark,	2	2	27,000	17,220	30,000	57	278
	Drift,	Gasous,	Fan,	1 6 x 6	Pollock,	30		26,500	24,510	45,000	116	314
	Drift,	Non-gas,	Furnace,	4 8 x 12	Pollock,	3	3	45,500	28,520	42,000	110	205
	Drift,	Non-gas,	Furnace,	4 8 x 12	Pollock,	12		40,000	10,500	45,200	132	207
	Drift,	Non-gas,	Fan,	4 8 x 16	Brazil,	2	2	34,000	21,150	34,000	104	330
	Drift,	Gasous,	Furnace,	7 8 x 20	Brazil,	40	2	24,000	18,500	26,000	110	218
	Drift,	Gasous,	Fan,	4 8 x 15	Brazil,	4	4	20,250	20,580	65,000	131	432
	Drift,	Gasous,	Fan,	5 8 x 18	Robinson,	6	6	20,000	15,510	50,000	171	228
	Drift,	Gasous,	Fan,	5 8 x 18	Robinson,	20		30,000	11,500	26,000	34	285
	Drift,	Non-gas,	Furnace,	5 8 x 18	Robinson,	20		30,000	11,500	26,000	34	285
	Drift,	Non-gas,	Fan,	1 8 x 6	Stine,	20		30,000	19,000	25,000	60	600
	Drift,	Gasous,	Fan,	5 8 x 20	Valian,	3	3	61,750	20,500	72,000	135	457
	Drift,	Gasous,	Furnace,	5 8 x 20	Valian,	15						
	Drift,	Non-gas,	Furnace,	6 8 x 16	Pollock,	42	3	31,500	30,900	54,000	92	320
	Drift,	Non-gas,	Furnace,	6 8 x 20	Pollock,	38.6		7,800	5,500	15,400	43	180
	Drift,	Gasous,	Fan,	4 8 x 16	Pollock,	3	3	43,000	26,750	64,000	61	504
	Drift,	Non-gas,	Fan,	6 8 x 20	Pollock,	2	2	34,120	20,620	28,400	136	265
	Drift,	Non-gas,	Fan,	4 8 x 16	Marne,							
	Drift,	Gasous,	Fan,	6 8 x 20	Pollock,	5	5	51,000	32,480	52,000	143	337

*Non-gaseous.

J. Names of mines using coal cutting machines, names of machines, power used, geological and local names of seams, thickest and thinnest seams where machines are used, and the approximate number of tons produced by machines during 1902.

Name and Number of Machines in Use.	Total machines used.										Power used by machines.	Geological and local name of seam.	Average thickness in inches.		Thickest.	Thinnest.	Approximate number of tons produced by machines.
	Ingersoll.	Sullivan.	Harrison.	Jeffrey.	Morgan-Gardner.	Goodman.	Brown.	Link Belt.	H. and H.	Pittsburg.							
Kind of opening.	(Gaseous or non-gaseous.)																
Black Diamond.	Drift.	Gasous.	9	1	1	1	1	1	1	1	Electric.	Pittsburg Thin.	69	62	30	47,191	
Beaumont.	Slope.	Gasous.	1	1	1	1	1	1	1	1	Electric.	Pittsburg Thin.	69	69	62	89,294	
Bumby.	Drift.	Gasous.	4	1	1	1	1	1	1	1	Electric.	Pittsburg Thin.	62	61	61	69,138	
Card Bluff.	Drift.	Non-gas.	1	1	1	1	1	1	1	1	Electric.	Pittsburg Thin.	58	60	56	26,186	
Cincinnati.	Drift.	Gasous.	1	1	1	1	1	1	1	1	Electric.	Pittsburg Thin.	39	61	38	194,778	
Cincinnati.	Drift.	Gasous.	4	1	1	1	1	1	1	1	Electric.	Pittsburg Thick.	61	62	60	191,296	
Cincinnati.	Slope.	Gasous.	8	1	1	1	1	1	1	1	Electric.	Pittsburg Thick.	83	84	82	233,431	
Eclipse.	Drift.	Gasous.	1	1	1	1	1	1	1	1	Compressed air.	Pittsburg Thin.	65	78	58	125,588	
Payette City.	Drift.	Gasous.	1	1	1	1	1	1	1	1	Electric.	Pittsburg Thin.	61	63	59	219,138	
Gallatin.	Drift.	Gasous.	1	1	1	1	1	1	1	1	Electric.	Pittsburg Thick.	86	90	83	292,338	
Knob.	Drift.	Gasous.	1	1	1	1	1	1	1	1	Electric.	Pittsburg Thin.	60	64	57	181,064	
Knob.	Drift.	Gasous.	1	1	1	1	1	1	1	1	Electric.	Pittsburg Thin.	60	64	57	253,199	
Little Redstone.	Drift.	Gasous.	1	1	1	1	1	1	1	1	Electric.	Pittsburg Thin.	59	62	56	172,392	
Morgan.	Drift.	Gasous.	1	1	1	1	1	1	1	1	Electric.	Pittsburg Thin.	58	61	56	74,856	
Morgan.	Drift.	Non-gas.	1	1	1	1	1	1	1	1	Electric.	Pittsburg Thin.	68	71	65	78,042	
Red.	Drift.	Gasous.	1	1	1	1	1	1	1	1	Compressed air.	Pittsburg Thick.	83	90	78	223,086	
Red.	Drift.	Gasous.	1	1	1	1	1	1	1	1	Electric.	Pittsburg Thick.	88	84	82	236,949	
Red.	Drift.	Gasous.	1	1	1	1	1	1	1	1	Electric.	Pittsburg Thick.	80	80	75	237,510	
Red.	Drift.	Gasous.	1	1	1	1	1	1	1	1	Electric.	Pittsburg Thick.	81	80	76	189,668	
Red.	Drift.	Gasous.	1	1	1	1	1	1	1	1	Electric.	Pittsburg Thin.	64	72	57	112,251	
Red.	Drift.	Gasous.	1	1	1	1	1	1	1	1	Electric.	Pittsburg Thin.	57	60	54	49,138	
Red.	Drift.	Gasous.	1	1	1	1	1	1	1	1	Electric.	Pittsburg Thin.	62	61	60	63,000	
Red.	Drift.	Gasous.	1	1	1	1	1	1	1	1	Electric.	Pittsburg Thick.	82	85	69	142,390	
Red.	Drift.	Gasous.	1	1	1	1	1	1	1	1	Electric.	Pittsburg Thick.	85	86	75	85,937	
Red.	Drift.	Gasous.	1	1	1	1	1	1	1	1	Compressed air.	Pittsburg Thin.	62	61	60	81,392	
Red.	Drift.	Gasous.	1	1	1	1	1	1	1	1	Electric.	Pittsburg Thin.	62	61	60	92,238	

Nottingham.	Drift.	Gasous.	7	1	7	Electric.	Pittsburg Thin.	57	50	54	122,849
Somers No. 1.	Drift.	Gasous.	1	1	1	Electric.	Pittsburg Thick.	82	84	89	206,700
Somers No. 2.	Drift.	Gasous.	1	1	1	Electric.	Pittsburg Thick.	66	72	69	237,489
Somers No. 3.	Drift.	Non-gas.	1	1	1	Electric.	Pittsburg Thick.	78	84	72	44,133
Somers No. 4.	Drift.	Non-gas.	1	1	1	Electric.	Pittsburg Thin.	72	75	70	75,997
Charter No. 1.	Drift.	Gasous.	1	1	1	Electric.	Pittsburg Thin.	72	72	72	233,437
Charter No. 2.	Drift.	Gasous.	1	1	1	Electric.	Pittsburg Thin.	72	72	72	9,684
Ellsworth No. 1.	Drift.	Gasous.	2	8	1	Compressed air.	Pittsburg Thin.	73	80	66	223,421
Ellsworth No. 2.	Drift.	Gasous.	1	3	1	Compressed air.	Pittsburg Thin.	74	82	66	228,827
Ellsworth No. 3.	Drift.	Gasous.	1	1	1	Compressed air.	Pittsburg Thin.	71	78	64	131,084
Ellsworth No. 4.	Drift.	Gasous.	1	1	1	Compressed air.	Pittsburg Thick.	78	96	69	946,241
Vesta No. 1.	Drift.	Gasous.	11	2	10	Compressed air.	Pittsburg Thick.	69	69	69	101,500
Vesta No. 2.	Drift.	Gasous.	1	1	1	Compressed air.	Pittsburg Thin.	63	66	60	198,516
Star.	Drift.	Gasous.	1	1	1	Electric.	Pittsburg Thin.	60	69	60	10,075
Hazel Kirk.	Drift.	Non-gas.	1	1	1	Electric.	Pittsburg Thin.	70	71	69	122,168
Budd.	Drift.	Non-gas.	1	1	1	Electric.	Pittsburg Thick.	96	108	84	36,400
Dilworth.	Drift.	Gasous.	1	1	1	Electric.	Pittsburg Thin.	66	72	69	231,646
Ella.	Drift.	Gasous.	1	1	1	Electric.	Pittsburg Thin.	68	72	64	100,216
Peters Creek.	Drift.	Gasous.	1	1	1	Electric.	Pittsburg Thick.	96	96	96	231,191
Marine.	Drift.	Gasous.	1	1	1	Electric.	Pittsburg Thin.	65	68	62	184,280
Sherringer.	Drift.	Gasous.	1	1	1	Electric.	Pittsburg Thin.	75	84	66	175,510
Berthel.	Drift.	Non-gas.	1	1	1	Electric.	Pittsburg Thin.	72	78	66	68,822
Blanche.	Drift.	Non-gas.	1	1	1	Electric.	Pittsburg Thick.	69	72	66	61,965
Rachel.	Drift.	Non-gas.	1	1	1	Electric.	Pittsburg Thin.	72	72	72	115,176
Clydes.	Drift.	Non-gas.	1	1	1	Electric.	Pittsburg Thin.	72	72	72	120,517
Iron City.	Drift.	Non-gas.	1	1	1	Electric.	Pittsburg Thin.	72	72	72	27,691
Clinton.	Drift.	Gasous.	1	1	1	Electric.	Pittsburg Thin.	60	60	60	549,184
Totals.			29	66	19	161	106	5	4	1	237

Fatal Accidents.

Constantine Rami, a miner, was fatally injured January 2, in Knob mine, by a fall of slate, while making a place to set a post.

On January 4, Joseph Cabitchie, a miner, was fatally injured in Fayette City mine, by a fall of slate, while making a place to set a post.

At Eclipse (river) mine, January 9, John Balser, a miner, was instantly killed by being run over by the Dilly trip, while he was on his way out of the mine. He was warned to get into a "shelter hole," but did not do so.

Joseph Colenso, miner, was instantly killed, and Alexander Joback, miner, was fatally injured, January 18, in Tremont mine, by being struck by the Dilly trip, while on their way out of the mine. These men should not have been on the Dilly road, as it was not the travelling way.

At Coal Centre mine, January 20, Giovanni Tayliaferi, a miner, was fatally injured by a fall of slate while knocking coal.

Charles Waschko, a dumper, was fatally injured February 3, at North Webster mine, by being struck by a runaway car from incline.

On February 20, Louis Schraider, a miner, employed at the Bertha mine, was fatally injured by a fall of slate.

About noon on March 6, an explosion of fire damp occurred in the Catsburg mine, which resulted in the death of five persons: Isaac Eastwood, Robert Howey, James Howey, John Gelder and William McFarland, and the serious injury of James Ternent and a slight injury to John Hager.

On March 3d, an entry had taken fire from a blast, and very little, if any, effort was made by the person who fired the shot to extinguish the flames. When the officials of the mine were informed of the fire it had gained such progress, as to make it impossible for them to reach the scene of the fire. After a hasty consultation it was decided to isolate it by the use of stoppings; these were made of wood and put in. Within 48 hours they concluded that the fire was extinguished and proceeded to remove the boards. While doing this work, the explosion occurred, with the result above stated.

This was a terrible oversight on the part of these unfortunate men, to attempt to remove the stoppings so soon after they had been put up, and I can only attribute it to a case of over-anxiousness, as they were all practical men.

On March 8, Frank Kudrick, a loader, was fatally injured in Irons mine, while trying to put a post under a piece of slate, which fell, striking him and resulting as above stated.

Larimer Shook, a miner, employed in the Apollo mine, was instantly killed by a fall of slate, March 15. At the time of the acci-

dent, he was preparing to put in a cross-bar. The slate had been "sounded" a short time before, and was considered safe.

In Clyde mine, March 20, John Johnson, a miner, was instantly killed by a fall of coal, while "bearing in." He had fired a shot which was on the solid; this shot "jumped," shattering the coal along the face of the room for quite a distance, and while Johnson was undermining it deeper, it fell with above result.

Giovanni Dolfi, a miner, employed in the Hazel Kirk mine, was fatally injured April 7, by a fall of slate, while shoveling coal from under it. This accident was the result of an error of judgment, as posts were used in such a manner as not to cover a slip that appeared in the slate.

In Vesta No. 1 mine, May 7, Tabel Maskey, a miner, was instantly killed by a fall of slate, while knocking coal.

John Bacus, a trapper, in the Eclipse (railroad) mine, was fatally injured by being caught between a door and car, while attempting to get between the hitchings. This accident occurred May 15.

On May 15, Paul Bookhard, a miner, employed in the Apollo mine, was instantly killed by a fall of slate, which fell out between the posts.

John Camaskey, a miner, was fatally injured May 19 by a fall of slate while loading a car. The slate fell out between post and rib. This accident was caused by the negligence of deceased, as the space between the post and rib was ten feet.

On May 31, Andrew Grabic, a miner, employed at the Ellsworth No. 3 mine, was fatally injured by a fall of slate. Deceased had been warned about the dangerous condition of the slate.

Peter Andre, a miner, was instantly killed June 2, in Charleroi No. 1 mine, by a fall of slate while loading a car.

At Arnold No. 2 mine, June 2, Smith Anthony, a miner. The deceased had fired a shot in the coal, but it failed to throw it all, and while he was knocking the remainder, coal and slate fell, killing him instantly.

Robert Johnson, a miner, was instantly killed in Fayette City mine, June 5, by a fall of slate. The deceased worked in an entry and after firing a shot, started to load a car without making any examination of the slate. Previous to the shot being fired, he had been instructed to make the slate safe, but neglected to do so.

On June 6, at Acme mine, an accident occurred which resulted in the death of Andrew Kolman, a miner, by a fall of slate, while "bearing in." The condition of the room showed that the deceased had been careless.

At Vesta No. 1 mine, June 9, Charles Eskleman, a miner, was fatally injured by being struck by a post, which in turn had been dis

lodged by falling slate. The deceased, at the time of the accident, was drawing slate posts for the purpose of taking the slate down.

Antonio Boreal, a miner, while at work in Ellsworth No. 2 mine, June 12, was instantly killed by being struck by a descending cage, while, as is supposed, he was passing from one side of the shaft to the other. Boreal should have made use of the proper passageway around shaft.

At Shoenberger mine, June 17, Peter Maylato, a miner, was fatally injured by a fall of slate. The deceased was working in a room rib and while knocking coal next to the slate, the slate fell on him, with the above result.

Stephen Werber, a miner, employed at the Hazel Kirk mine, was fatally injured June 19, by a fall of slate. At the time of the accident the deceased was removing a stump that had been left in bearing in.

At North Webster mine, June 23, Charles Cowles, a miner, was instantly killed by a fall of slate, while loading a car. A driver was in the place at the time of the accident and previous to its occurrence told the deceased to "watch the slate," and Cowles said "all right;" this was followed immediately by the slate falling.

John Emery, a miner, was instantly killed in Bertha mine, July 2, by a fall of slate. The slate had been examined a short time previous and was considered safe, but the deceased found it unsafe and told his partner to "jump," but the former failed to get out of the way.

At Bertha mine, July 2, Thomas Yoriak, a miner, was fatally injured by a fall of slate, while knocking coal.

July 3, Gottlieb Zelunder, a miner, was fatally injured by a fall of slate while loading a car. The deceased had been warned by his partner that the slate was dangerous.

Thomas Barton, a trapper, was fatally injured in Vesta No. 1 mine, July 15, by being caught between electric motor and a trip of cars. The deceased was warned by the mine foreman, as I am informed, not to interfere with the motor.

On July 16, Michael Bossick, a miner, was fatally injured by being caught between a car and entry pillar, in Marine mine. The deceased had changed the latches for the purpose of switching the car in on an entry, and afterwards walked beside of the car until it caught him, as stated. There was ample room at the latches for the car to pass.

At Vesta No. 3 mine, July 16, Marko Peteresic, a miner, was fatally injured by a fall of coal while "bearing-in." His partner had warned him of the dangerous condition of the coal, some time previous to the accident.

James Payne, a miner, employed at the Coal Bluff mine, was in-

stantly killed July 18, by a fall of slate, while loading a car of coal. He had been warned that the slate was dangerous.

On July 22, Charles Yagors, a miner, while at work in the Cincinnati mine, was instantly killed by a fall of slate. There was no evidence to show what the deceased was doing at the time of the accident.

At Ellsworth No. 1 mine, July 23, Thomas Hanson, an engineer, was instantly killed by the bursting of a steam heater in the engine room, part of which struck him.

John Ketchner, a miner, was fatally injured by a fall of slate, while breaking up a piece of slate, which had previously been blasted down. This accident occurred in the Budd mine, July 24.

On August 11, at Knob mine, John Polent, a miner, was instantly killed by a fall of upper slate. It is not known positively when the accident occurred or what the deceased was doing at the time, as he was found some distance from where he should have been at work.

At Vigilant mine, August 12, Conrad Conlin, a miner, was fatally injured by a fall of slate, while loading a car.

John Williamson, a miner, employed at the Arnold No. 2 mine, was instantly killed on September 6, by a fall of slate, while loading a car.

September 12, at Blanche mine, by a fall of slate, Alexander Dowker, was killed instantly, while loading a car.

George Schobanko, a miner, in Catsburg mine, September 22, was instantly killed by a fall of slate, while loading a car.

At Vigilant mine, October 14, John Holliday, a machine runner, was fatally injured by a fall of slate, while running a mining machine.

Michael Holock and Michael Augustine, miners employed at Arnold No. 2 mine, were instantly killed by a fall of slate, October 21. They had loaded a car, and it is supposed that they were resting under the slate. On examination of the place, I found that the "tight" had been opened by a shot, part of the coal having been loaded out, leaving an exposure of slate of nearly 56 square feet, which was, in a great measure, cut off by slips, their angle of fracture being against safety. Posting had been done, but posts were improperly located.

At Ivill mine, October 23, John Masko, a driver, was instantly killed by a fall of rock, while assisting at the fire which was in progress in the mine.

October 24, at Nottingham mine, John Dragi, a miner, was fatally injured by a fall of slate, while drawing a post under it.

John Roberts, a machine scraper, was instantly killed, October 25, in Ella mine, by a fall of slate, while removing dust from a mining machine. No examination of the place had been made by the deceased or his partner, previous to the accident.

Stephen Guidas, a miner, employed in the Somers No. 1 mine, was

so seriously injured October 29, by a fall of slate, that death resulted on November 28th.

On November 1, John Augustinack, a miner, was instantly killed in Vesta No. 3 mine, by a fall of slate, while knocking a post from under it.

At Marine mine, November 18, Kovenic Weazly, a miner, was fatally injured by a fall of slate.

John Troth, a machine runner, employed at Arnold No. 2 mine, November 22, had his right leg cut off by the bits of a mining machine. He was removed to the hospital and died from the effects of the injury.

In Vesta No. 3 mine, November 22, Charles Brattis, was instantly killed by a fall of rock. His body was found not less than one thousand yards from his working place, and in a road unfrequented, except by a few persons who made use of it on account of its being a nearer road to their homes, but this was not the case with Brattis, as his route was by the haulage way.

At Eclipse railroad mine, December 1, James E. Morris, a miner, was instantly killed by coming in contact with an electric wire used to convey power to mining machines. Morris had loaded a car and was on the entry to get an empty one, and to allow the driver to pass, he stepped back, and in doing so, he touched the wire, which resulted as above stated.

James Calvert, a day hand, employed at the Vesta No. 3 mine, was fatally injured December 1, by being caught between coal pillar and a trip of cars. He was removing coal from the road and did not notice the trip coming toward him.

At Vigilant mine, December 10, William Bertash, a miner, was instantly killed by a fall of slate, while loading a car.

Michael Plisko, a miner, while at work in Peters Creek No. 1 mine, December 15, was fatally injured by a fall of "horseback," while loading a car.

On December 24, at Ellsworth No. 3 mine, Henry C. Evans, assistant outside foreman, was fatally injured by falling from the Ram platform of the tippie house, striking a steel girder some 15 feet below, then to the ground, 7 feet. He lived about four hours.

Joseph Kosel, Albert Kosel, Charles Crow and Frank Mobiani, miners, were instantly killed December 27, in Little Redstone mine, by an explosion of fire damp, while on their way to their several working places in the mine. The mine had been idle for several days owing to some connections which were being made in the power house, which caused the stoppage of the fan; the gas accumulated in the entry known as No. 12, extending itself to the main entry for some distance, where it was ignited, as is supposed, by the open light of Joseph Kosel, resulting as above.

The verdict of the coroners jury was to the effect that these per-

Henry Louttit,
Inspector,



ING THE
STONE MINE
NEW HILL OF THE
M.R.C.C. & C.CO.

of December 27, 1902.

Pa. - January 3, 1903.

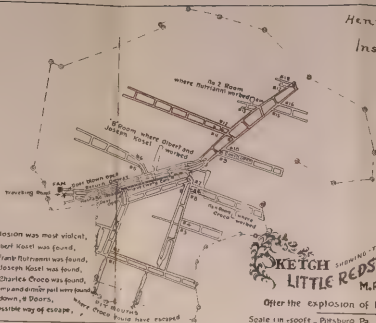
Henry Louttit,
Inspector.

- == Where explosion was most violent,
- Where body of Albert Kosel was found,
- Where body of Frank Nutrianni was found,
- Where body of Joseph Kosel was found,
- Where body of Charles Croco was found,
- Where Croco's lamp and dinner pail were found,
- Doors blown down, & Doors,
- Croco's possible way of escape,

SKETCH SHOWING THE
LITTLE REDSTONE MINE
NEW HILL OF THE
M.R.C.C. & C.CO.

After the explosion of December 27, 1902.

Scale 1 in = 500 ft - Pitsburg, Pa. - January 3, 1903



sons came to their death by violating the law in passing the permanent danger signal, which was in position and locked. A map accompanies this report showing the extent of the explosion.

Examination of Candidates for Mine Foremen.

The annual examination was held in council chambers, at Monongahela, Pa., January 21, 22 and 23. The Board of Examiners was D. B. Blackburn, operator; J. P. N. Coulter, miner, and Henry Loutitt, Mine Inspector. Forty-five applicants appeared before the board, of which twenty-seven were successful, viz: First grade: Alexander McClymont, John L. Rea, Richard Maize, Thomas Harper, James A. Jenkins, Thomas A. Furniss, John Morgan, William McNeill, Daniel Collins, John Gelder, Daniel M. Griffith, Charles Elliot, Peter Neil, James D. Stevenson, John J. Cairns, T. B. Cavanaugh, John Jackson, Charles A. Davis, Thomas P. Kearney, John G. Hall, J. F. Charlesworth, Daniel Blower. Second grade: Joseph Novack, William Cowell, Robert Barr, Harris Booker and William Shotton.

Mines on the Monongahela Division of the Pennsylvania Railroad.

Charleroi No. 1.—General condition of ventilation and drainage fair.

Charleroi No. 2.—Does not employ a sufficient number of persons, at the present time, for the law to apply to it.

Fidelity.—This mine has been idle since the early part of the year; seems to have been abandoned.

Acme.—Ventilation and drainage requires improvement, in parts of the mine.

Shoenberger.—General condition of mine, fair.

Courtney.—When last examined, was found in a fair condition as regards ventilation and drainage.

Star.—General condition of mine satisfactory.

Little Squaw.—Ventilation and drainage required improvement in parts of the mine.

Banner.—General condition of ventilation and drainage satisfactory.

Buffalo and Cliff.—These mines were idle the entire year.

Mines on the Monongahela and Washington Division of the Pennsylvania Railroad.

Dunkirk.—A new slope opening, located about one-half mine north of Frye's station. At present the ventilation is produced by exhaust

steam, but this method will be replaced by a ventilating fan, the construction of which is now under way.

Hazel Kirk No. 1.—General condition of mine satisfactory.

Ellsworth Nos. 2, 3 and 4.—In fair condition as regards ventilation, but the drainage required improvement in parts of the mines.

Ellsworth No. 1.—General condition of mine fair.

Hazel Kirk No. 2.—This is a new shaft opening, located about one mile north of No. 1. Has not advanced sufficiently for a general description.

Mines on the Monongahela River.

Budd.—In fair condition, as regards ventilation and drainage.

Riverville, Fox, Champion, Old Eagle, New Eagle, Pine Run and Abe Hays.—Idle during the entire year.

Clipper.—The ventilation requires improvement, as there is much air lost owing to a large number of the stoppings on the butt entries having been made of the refuse of the mine. I have suggested that they be replaced by other material, so as to prevent, as far as possible, the air escaping into the return before reaching the faces of the working places. Drainage is also a matter that should be attended to.

Mongah.—General condition of mine satisfactory.

Hildale.—This mine, on my last visit, was in a very unsatisfactory condition, as regards ventilation and drainage. It seems that no earnest effort was being made to improve matters until those in charge were peremptorily ordered to improve them.

Fayette City.—In fair condition when last visited.

Risher.—General condition of mine satisfactory.

Crescent.—The inlet air measurement was 34,400 cubic feet, while the maximum quantity on any of the entries was only 6,500 cubic feet; showing a very large leakage between these places. Suggestions were made with a view to the betterment of these conditions.

Ella.—General condition of drainage, fair; ventilation required improvement in parts of the mine.

Marine.—General condition of mine fair.

Milesville.—General condition of the ventilation, satisfactory. Considerable work has been done on the traveling way of this mine to put it in such condition, as required by law. Drainage, fair.

Black Diamond.—This mine ceased operation before I reached it for inspection.

Vigilant.—The ventilation, in some parts of this mine, was unsatisfactory, which is owing entirely to the improper distribution of the air, as the quantity entering the inlets is ample, at the present time.

Coal Bluff.—Ventilation and drainage, fair. The passage way to the fan, which is also the emergency travelling way, has been much improved since a former visit.

Cincinnati.—Previous to reaching the mine, on my last visit, gas was found to have accumulated on some falls on one of the entries. This entry was vacated. On examining the places, I directed that the entry parallel to it be also vacated. Each entry remained so until the fire-damp was removed. Aside from this, the mine was in fair condition.

Camden.—Not in operation when last visited.

Clinton.—General condition of mine, satisfactory.

Bunola.—General condition of mine, fair.

Coal Centre.—Ventilation and drainage, unsatisfactory. The greater part of the work now being done at this mine is the drawing of the entry pillars and room ribs.

Rock Run.—Condition of drainage, satisfactory. Ventilation, in parts of the mine, required improvement.

Vesta No. 3.—As a whole, this mine is in fair condition, but one section, owing to it being part of the "return" of the other, was not up to the legal requirements.

Allequippa.—Not in operation when last visited.

Catsburg.—General condition of mine, fair.

Ivill.—Mine not in operation. On the morning of April 17th last, this mine was discovered to be on fire near the main double parting, which at this writing is still burning.

Walton Upper.—Did not visit this mine while it was in operation.

Gallatin.—Ventilation and drainage required improvement in parts of the mine.

Iron City.—The ventilation and drainage in parts of this mine is very unsatisfactory. The passageway to the second means of egress was driven under the old system of mining; it is narrow and low. The present company has further obstructed it by the introduction of electric wires and water pipes. By direction, quite an amount of work has been done on it, but it is yet far from being in the condition required by law.

Dilworth.—On my last visit to this mine, I found it in a satisfactory condition.

Tremont.—Ventilation and drainage required improvement in parts of the mine. I gave directions relative to these matters, and I am informed that a marked improvement has been made in its sanitary condition.

Vesta No. 1.—In a general way, this mine is in fair condition, as regards ventilation. The traveling way required attention, in parts, to comply with the law.

Vesta No. 2.—Now part of Vesta No. 1, in fair condition, as regards ventilation and drainage.

Apollo.—While the drainage of this mine is satisfactory, the ventilation in parts of it is not. There is an ample current of air entering the mine, for the number of persons employed, but a greater portion of it does not reach the working faces. I have called the attention of the management to the matter with a view of bettering its condition.

Eclipse.—Ventilation and drainage, in parts of the mine, are inadequate. Since my visit, I am informed, much improvement has been made.

Walton Lower.—Now abandoned.

Rostraver.—The ventilation, as regards New Hill, fair, as is also Front Hill, but the Old Hill is very unsatisfactory. I ordered part of this to be vacated, owing to the presence of black damp. The drainage required improvement.

Beaumont.—General condition of mine, fair.

Champion.—Not in operation.

Little Redstone.—General condition of mine, fair.

Vesta No. 4.—Has not as yet commenced to ship coal; entries are being driven but the coal is being stocked. General condition of mine, fair.

Knob.—Ventilation required improvement, in parts of the mine, when last visited.

Clyde.—General condition of mine, satisfactory. The mine is opened on the three entry system, the intake air current entering on the side entries and returning to the fan by the centre one. The mining is done exclusively by electric mining machines, five of the Jeffrey and one of the Sullivan type being in use. The power house, machine and blacksmith shops are built of sandstone; the pier and abutment supporting the tippie is built of the same material. The tippie is of steel and equipped with two automatic cross-over dumps. After the cars are emptied, they are elevated by automatic chain hoisting device. Two chain hauls which are operated by two engines, which elevate the cars after they pass over the reverse switch; from here they run back by gravity to the mine entrance, a distance of 500 feet. All the buildings have slate roofs. A 300 horse power engine furnishes the power for a 175 K. W. Westinghouse generator. Immediately adjoining the power house is a 16 foot Capell ventilating fan, operated by an engine with 20" cylinders, having a stroke of 18 inches. A 13 ton Electric locomotive is used in the movement of cars from central points, which pushes the full cars out and hauls the empty ones in, thus avoiding the necessity of making a flying switch. The cars are of three ton capacity. The air current is in six divisions.

Mines on the Peters Creek Division of the Pennsylvania Railroad.

Rachel.—General condition of drainage, fair. The ventilation, in parts of the mine, should be increased to comply with the law.

Peters Creek Nos. 1 and 2.—Mines not in operation when last visited.

Mines on the Pittsburg and Lake Erie Railroad.

Domestic.—A new drift opening, located opposite Monongahela City. Ventilation is produced by boiler furnace and exhaust steam. Persons employed, 27. General condition of mine, fair.

Naomi.—A new slope and shaft opening, located near Naomi station. Only a few persons are at work inside—driving an entry from the shaft to slope. Extensive improvements are being made on the outside, consisting of trestle, tracks, tipple, etc.

North Webster.—Ventilation and drainage, fair.

Irons.—Ventilation, satisfactory; drainage required improvement in parts of the mine.

Somers No. 4.—Ventilation, fair. Drainage, in parts of the mine, is not up to the legal requirements.

Arnold No. 2.—Condition of mine as regards ventilation, satisfactory. Drainage required improvement in parts of the mine.

Somers No. 3.—Ventilation and drainage requires improvement in parts of the mine.

Equitable.—Ventilation and drainage in parts of the mine, are not up to the legal requirements. A marked improvement has been made in the sanitary condition of the mine since my visit.

Somers No. 1.—On my last visit to this mine, the inlet air measurement showed 59,320 cubic feet entering the mine, but a large quantity of this escaped into the "return" before it reached the working faces, consequently the latter were not ventilated as required by law. Since my visit, I am informed that the cause of complaint has been removed.

Manown.—General condition of mine, fair. A natural gas well has passed through the neck of one of the abandoned rooms; the well being with 28 feet of one of the inlet air passageways. The well is a producer and shows a very heavy pressure. The movement of the gas through the casing of the well is plainly discernable in the vicinity of the place where it passes through the workings. Being of the opinion that the presence of this well was a menace to the safety of the mine, owing to the possibility of leakage of gas from it becoming mixed with the intake air of the mine, I called the attention of the management to the matter, and after consultation with representatives of the gas company, it was decided, that under the circumstances, the best thing to do was to encase the well by a brick wall.

and cement the opening between the casing and wall of the well, for some distance below the floor of the mine.

Arnold No. 1.—General condition of mine, fair.

Somers No. 2.—The general condition of this mine, when last visited, was fair.

Mines on the Pittsburg and Wheeling Division of the Baltimore and Ohio Railroad.

Anderson, Gastonville Nos. 1 and 2.—These mines were idle the entire year.

Eclipse.—General condition of mine, fair.

Germania.—When last visited, the mine was in fair condition, as regards ventilation and drainage.

Blanche.—Ventilation, fair; drainage, in parts of the mine, was very unsatisfactory.

Nottingham.—Not in operation when last visit was made.

Bertha.—Ventilation and drainage inadequate; the former was owing to the air currents not having been properly conducted, as the fan was producing an ample quantity.

W. H. Flint & Co.	Westmoreland.	.....	Loyd L. Flint.	.....	Monessen.	.....	P. and L. E. R. R.
Iron City.	Washington.	.....	.....	.....	Monongahela.	.....	M. D. of the P. R. R.
Star.	Washington.	.....	N. H. Robinson.	.....	Webster.	.....	P. and L. E. R. R.
A. R. Budd.	Westmoreland.	.....	A. G. Leonard.	.....	.....	.....	.....
Crescent Coal Co.	Allegheny.	.....	Henry E. Kinloch.	.....	Epton.	.....	P. C. Branch of P. R. R.
Peters Creek No. 1.	Allegheny.	.....	Henry E. Kinloch.	.....	Epton.	.....	P. C. Branch of P. R. R.
Peters Creek No. 2.	Allegheny.	.....	.....	.....	Sunny Side.	.....	P. and L. E. R. R.
United Coal Co.	Allegheny.	.....	Wm. Bainbridge.	.....	.....	.....	.....
Dunkirk Coal Co.	Washington.	.....	Andrew S. Braznell.	.....	Monongahela.	.....	N. D. & M. & D. of the P. R. R.
Hazel Kirk Gas Coal Co.	Washington.	.....	Lute Hornickel.	.....	Monongahela.	.....	M. & W. D. of P. R. R.
Hazel Kirk.	Washington.	.....	.....	.....	Monongahela.	.....	M. D. of the P. R. R.
Schoenberger Gas Coal Co.	Washington.	.....	W. S. Lewis.	.....	.....	.....	.....
Schoenberger.	Washington.	.....	.....	.....	Freshertown.	.....	By Morgantown boat.
Clyde Coal Co.	Greene.	.....	Lee M. Crowthers.	.....	.....	.....	.....
Dilworth Coal Co.	Washington.	.....	Hugh Ferguson.	.....	Rice's Landing.	.....	By Morgantown boat.
Dilworth.	Washington.	.....	.....	.....	Stockdale.	.....	M. D. of the P. R. R.
Acme.	Fayette.	.....	John M. Crawford.	.....	Fayette City.	.....	P. and L. E. R. R.
Acme.	Allegheny.	.....	R. C. Campbell.	.....	Monongahela.	.....	P. and L. E. R. R.
Naomi.	Allegheny.	.....	John S. Griffith.	.....	Monongahela.	.....	P. and L. E. R. R.
Domestic Coal Co.	Allegheny.	.....	.....	.....	Broughton.	.....	P. & W. D. of R. & O.
Domestic.	Allegheny.	.....	.....	.....	Wilson.	.....	P. C. Branch of P. R. R.
Peoples Coal Co.	Allegheny.	.....	.....	.....	Venetia.	.....	P. & W. D. of R. & O.
Manufacturers' and Consumers' Coal Co.	Allegheny.	.....	.....	.....	.....	.....	.....
Bertha.	Allegheny.	.....	James B. Noel.	.....	.....	.....	.....
Rachel.	Allegheny.	.....	W. N. Wilson.	.....	.....	.....	.....
Blanche.	Washington.	.....	Geo. H. Fleming.	.....	.....	.....	.....

Rock Run,	70,702	²⁹⁹	514	71,436	111	132	197	12
Risher,	114,524	1,645	3,245	119,424	243	151	321	8
Rustaver,	94,356			94,255	263		272	8
Riverdale,								
Payette,	244,156	6,612	682	251,450	259	226	925	19
Washington,	245,741	1,178	4,800	251,809	264	130	910	19
Washington,	31,760	588	1,482	33,750	84		115	10
Allegbeny,								
Walton, Upper,								
Walton, Lower,								
Totals,	4,089,402	42,775	29,867	4,172,544	135,07	4,960	26	85
								13,362
								239
Pittsburg Coal Co.								
Anderson,			76	76				
Arnold No. 1,	279,711	3,765	335	283,811	210.7	272	3	1,980
Arnold No. 2,	203,294	2,251	1,162	206,617	244	175	5	1,090
Arnold No. 3,								
Washington,	116,845	2,243	475	119,556	186	150	3	630
Washington,								50
Washington,								14
Washington,								
Washington,	52,912	500	368	54,680	181.5	65		5
Washington,	116,265	1,909	1,269	119,333	245	124	6	954
Westmoreland,	110,716	2,392	2,78	113,346	165	100	2	760
Washington,	11,105	33	18	11,166	5	32	4	17
Washington,	121,559	305	178	121,760	130.5	116	1	1,000
Washington,								50
Washington,								22
Washington,								
Gastonville No. 1,								
Gastonville No. 2,	131,101	950	506	135,527	178	140	3	540
Washington,	169,422	3,141	410	172,973	267	135	4	500
Washington,	117,776	2,779	296	120,761	178	181	1	1,000
Washington,	115,095	2,713	67	117,806	236	124	2	650
North Washington,								11
Payette,	226,178	2,273	47	228,798	255	222	1	1,500
Somers No. 1,	288,024	3,814	1,218	292,056	277	338	4	800
Somers No. 2,								18
Somers No. 3,	74,188			74,188	270	59	2	300
Somers No. 4,	79,065			79,065	259	90	4	600
Totals,	2,187,538	29,036	6,556	2,223,130	213.01	2,360	11	41
								2,780
								224
Charleroi Coal Co.								
Charleroi No. 1,	252,137	3,309	3,700	259,197	275	245	1	4
Charleroi No. 2,	9,684			9,684		9		18
Totals,	261,821	3,309	3,700	268,881	275	252	1	4
								1,375
								400
								21
James W. Ellsworth & Co.								
Ellsworth No. 1,	227,149	17,709		244,858	301	242	1	4
Ellsworth No. 2,	234,556	6,184	2,242	242,932	298	256	1	3
Ellsworth Nos. 3 and 4,	118,287	12,729	78	131,094	246	167	2	
Totals,	579,992	36,622	2,329	618,934	281.66	645	4	7
								50,970
								51

*Totals in this column are averages.

TABLE II—Continued.

Names of Operators and Coaleries		County	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Vesta No. 1.	Vesta Coal Co.	Washington.	1,677,278	16,890	2,061	1,066,241	565	950	3	5	5,000	1,000	60
Vesta No. 2.		Washington.	396,338	2,600		388,938	267	248	4	1	1,200	200	24
Vesta No. 3.		Washington.						30					3
Totals.			1,443,616	19,490	2,061	1,465,179	416	1,218	7	6	6,200	1,200	85
Coal Centre, Marine.	C. Jutte & Co.	Washington.	95,878	2,341	170	98,374	288.4	141	1		600		11
		Fayette.	228,615	2,100	416	241,191	241.3	241	2	1	1,400	45	16
Totals.			324,493	4,441	586	339,565	529.75	382	3	1	1,700	45	27
Iron.	Henderson Coal Co.	Westmoreland.	133,333			133,333	268	123	1	2	657		7
Iron City.	W. H. Flint & Co.	Westmoreland.	22,567	180		22,747	119	65			150		5
Star.	Star Coal Co.	Washington.	100,000	700	800	101,500	175	198		2	500		9
Bald.	A. R. Bald	Westmoreland.	121,557	326	25	122,108	234	270	1	2	600		10
Peters Creek No. 1. Peters Creek No. 2.	Crescent Coal Co.	Allegheny.	100,198	600		100,798	274	128	1	2	540		9

Totals in this column are averages.

TABLE II—Continued.

Names of Operators and Collieries.	Number of Boilers.			Total horse power.	Locomotives.		Number steam engines of all classes.	Total horse power.	Number pumps delivering water to surface.	Capacity in gallons per minute.	Quantity delivered to surface per minute—gallons.	Number electric dynamos.	Number air compressors.	
	Number of Boilers.				Cylindrical.	Tubular.								Horse power.
	Cylindrical.	Horse power.	Horse power.											
Monongahela River Consolidated Coal and Coke Co.,	15	320	73	2,205	7,110	1	13	72	5,131	28	4,601	2,725	4	
Pittsburg Coal Co.,	25	645	19	1,922	3,477	.....	.....	48	3,481	21	3,445	960	19
Charles A. Coal Co.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
James W. Edwards & Co.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vestor Coal Co.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
C. J. J. & Co.,	1	80	24	3,715	3,480	.....	.....	10	2,070	4	1,338	553	1
Henderson Coal Co.,	6	120	1	35	155	.....	.....	8	1,168	11	350	175	1
W. H. Faint & Co.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Star Coal Co.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
A. R. Budd,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cresscent Coal Co.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
United Coal Co.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lunkrik Coal Co.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hazel Kirk Gray Coal Co.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Schenckberger Coal Co.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Trude Coal Co.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Trunk Coal Co.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stokely Coal Co.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Normal Coal Co.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Domestic Coal Co.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Manufacturers' and Consumers' Coal Co.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
People's Coal Co.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bunda Mining Co.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grand totals	48	1,172	166	10,257	21,847	1	42	194	16,875	94	13,652	7,853	54	

TABLE III.—Showing the number of each class of employees at each colliery in the First Bituminous District during the year 1902.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.										Grand total inside and outside.
		Mine foremen.	Assistant mine foremen.	Fire bosses.	Miners.	Machine runners.	Machine loaders.	Machine scrapers.	Drivers and runners.	Door boys and helpers.	Company men.	All other employes.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	Book-keepers and clerks.	All other employes.	Total outside.		
Monongahela River Consolidated Coal and Coke Co.																						
Allegheny,	Allegheny,	1	1	1	120	.....	.....	.....	6	.....	.....	.....	135	1	.....	.....	.....	1	17	158
Apollon,	Fayette,	1	1	1	200	.....	.....	.....	16	.....	.....	13	237	1	.....	.....	.....	1	19	30
Black Diamond,	Washington,	1	1	1	15	5	65	9	10	3	4	.....	110	1	.....	.....	.....	1	7	13
Baumont,	Washington,	1	1	1	50	2	55	2	14	3	.....	.....	135	1	.....	.....	.....	1	12	19
Burns,	Allegheny,	1	1	1	10	4	48	4	10	.....	.....	.....	86	1	.....	.....	.....	1	12	22
Camden,	Allegheny,	1	1	1	66	5	54	9	13	.....	.....	.....	148	1	.....	.....	.....	1	14	20
Coal Bluff,	Washington,	1	1	1	7	7	120	7	14	4	6	.....	168	1	.....	.....	.....	1	10	188
Cincinnati,	Washington,	1	1	1	9	11	120	11	15	3	6	.....	178	1	.....	.....	.....	1	15	23
Crisp,	Washington,	1	1	1	16	8	126	8	16	3	13	.....	195	1	.....	.....	.....	1	16	30
Cypress,	Washington,	1	1	1	110	.....	.....	.....	2	.....	.....	.....	125	1	.....	.....	.....	1	13	20
Fellows,	Washington,	1	1	1	35	5	95	5	17	12	11	.....	265	1	.....	.....	.....	1	12	28
Fayette City,	Washington,	1	1	1	21	8	185	8	20	10	11	.....	219	1	.....	.....	.....	1	14	31
Gallatin,	Fayette,	1	1	1	20	13	132	13	17	.....	.....	.....	157	1	.....	.....	.....	1	19	27
Hilldale,	Allegheny,	1	1	1	98	8	80	8	17	.....	.....	.....	108	1	.....	.....	.....	1	17	28
Knob,	Washington,	1	1	1	14	6	85	6	12	4	5	.....	137	1	.....	.....	.....	1	16	19
Little Redstone,	Washington,	1	1	1	30	6	105	6	19	10	16	.....	196	1	.....	.....	.....	1	16	35
Mongab,	Fayette,	1	1	1	12	8	90	8	15	2	8	.....	147	1	.....	.....	.....	1	10	21
Milesville,	Allegheny,	1	1	1	13	145	13	21	4	6	.....	.....	207	1	.....	.....	.....	1	13	22
Rock Run,	Allegheny,	1	1	1	9	8	125	8	15	4	15	.....	188	1	.....	.....	.....	1	11	15
Rostraver,	Allegheny,	1	1	1	102	8	110	8	17	1	.....	.....	215	1	.....	.....	.....	1	19	28
Tremont,	Allegheny,	1	1	1	65	3	80	3	8	.....	.....	.....	151	1	.....	.....	.....	1	14	29
Vigilant,	Washington,	1	1	1	26	3	150	4	20	7	14	.....	228	1	.....	.....	.....	1	16	34
Washington,	Washington,	1	1	1	55	6	130	6	17	.....	.....	.....	210	1	.....	.....	.....	1	12	23

TABLE IV.—List of fatal accidents that occurred in and about the mines of the First Bituminous District for the year ending December 31, 1902.

Date of accident	Name of Person.	Nationality by birth.	Occupation	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County	Nature and Cause of Accident in Brief
Jan.	Constantine Roml.	French.	Miner.	26	7/7	.....	.....	Knob.	Washington.	Fatally injured by a fall of slate.
4	Thomas Calisher.	English.	Miner.	17	.....	.....	.....	Payette City.	Payette.	Fatally injured by a fall of slate.
9	John Bahar.	Russian.	Miner.	20	.....	.....	.....	Eclipse, River.	Washington.	Instantly killed by being run over by daily trip.
18	Joseph Cadenso.	Italian.	Miner.	31	7/7	.....	.....	Tremont.	Payette.	Killed instantly by being run over by daily trip.
18	Alexander J. Buck.	Italian.	Miner.	26	M	1	3	Tremont.	Payette.	Fatally injured by being run over by daily trip.
20	Giovanni Daylaferri.	Italian.	Miner.	26	7/7	.....	.....	Coal Centre.	Washington.	Fatally injured by a fall of slate.
20	Charles Waschko.	German.	Company man.	17	.....	.....	.....	North Webster.	Westmoreland.	Fatally injured by being struck by a runaway car.
20	Louis S. Brubler.	Hungarian.	Miner.	41	M	1	2	Bartha.	Allegheny.	Fatally injured by a fall of slate.
20	Isaac Eastwood.	English.	Fire boss.	47	M	1	4	Cassburg.	Washington.	Killed instantly by an explosion of fire damp.
20	Robert Flawey.	English.	Fire boss.	41	M	1	.....	Cassburg.	Washington.	.....
20	James Flawey.	English.	Company man.	46	M	1	.....	Cassburg.	Washington.	.....
20	William M. Farland.	English.	Fire boss.	29	M	1	4	Cassburg.	Washington.	.....
20	Frank Kulelek.	Slovak.	Miner.	27	M	1	.....	Leary.	Westmoreland.	.....
20	Lorenzo Shook.	American.	Miner.	24	M	1	2	Apello.	Payette.	Fatally injured by a fall of slate.
20	John Ellisby.	Hungarian.	Miner.	44	M	1	.....	Clyde.	Washington.	Instantly killed by a fall of slate.
20	Gervason Despl.	Indian.	Miner.	18	7/7	.....	.....	Hazel Kirk.	Washington.	Fatally injured by a fall of slate.
20	Thad Masko.	Finlander.	Miner.	15	7/7	.....	.....	Vesta No. 1.	Washington.	Instantly killed by a fall of slate.
20	John Fakne.	Slovak.	Door boy.	14	7/7	.....	.....	Eclipse, Railroad.	Washington.	Injured by being caught between door and car; died from effects of the injury.
17	Paul Bookhaed.	Hungarian.	Miner.	40	M	1	4	Apello.	Payette.	Instantly killed by a fall of slate.
17	John Conkey.	Irish.	Miner.	40	M	1	4	Cincinnati.	Washington.	Fatally injured by a fall of slate.
17	Malcolm Graham.	Hungarian.	Miner.	35	M	1	1	Ellsworth No. 2.	Payette.	Fatally injured by a fall of slate.
17	Smith Anthony.	Miner.	Miner.	41	M	1	1	Arnold No. 2.	Payette.	Instantly killed by a fall of slate.
17	Edw. Andrie.	Hungarian.	Miner.	35	M	1	1	Charleston No. 1.	Washington.	Instantly killed by a fall of slate.
17	Robert Johnson.	American.	Miner.	25	M	1	1	Payette City.	Washington.	Instantly killed by a fall of slate.
17	Arthur G.	Polander.	Miner.	26	M	1	1	Vesta No. 1.	Washington.	Instantly killed by a fall of slate.
17	Charles Eskelmar.	Finlander.	Miner.	20	7/7	.....	.....	Ellsworth No. 2.	Washington.	Fatally injured by being struck by a post.
17	Artemio Broad.	Italian.	Company man.	25	7/7	.....	.....	Ellsworth No. 2.	Washington.	Instantly killed by being struck by a descending cage.

[illegible]

TABLE V.—List of non-fatal accidents that occurred in and about the mines of the First Bituminous District for the year ending December 31, 1902.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan.								
3	John Leever.	American.	Miner.	25	M.	Gallatin.	Allegheny.	Arm broken by a fall of slate.
6	Stephen Mosack.	Hungarian.	Miner.	26	M.	Catsburg.	Washington.	Big toe cut off by a fall of slate.
7	Frederick Klein.	German.	Miner.	45	M.	Risher.	Allegheny.	Foot sprained by a fall of coal.
7	John Siskier.	American.	Door boy.	14	S.	Milesville.	Allegheny.	Injured by being caught between cars.
9	Hane Sulvolka.	Pole.	Miner.	49	S.	Cincinnati.	Washington.	Injured by blast through room rib.
9	William Koshoutur.	Russian.	Miner.	29	S.	Eclipse.	Washington.	Leg cut off by being run over by dilly trip.
10	William Jarskir.	Pole.	Miner.	38	S.	Ellsworth No. 2.	Washington.	Leg fractured by a fall of coal and slate.
11	Stephen Petrof.	Russian.	Machine runner.	27	M.	Ellsworth No. 2.	Washington.	Leg broken by being struck by mining machine.
13	Joseph Malinska.	Russian.	Miner.	30	M.	Vigilant.	Washington.	Leg mangled; run over by motor trip.
14	John Crummett.	Russian.	Miner.	25	M.	Hazel Kirk.	Washington.	Foot bruised by a fall of slate.
15	Michael Havril.	Hungarian.	Miner.	35	M.	Kongah.	Washington.	Foot mangled by a pick passing through it.
17	John Zavala.	Pole.	Miner.	32	M.	Kongah.	Washington.	Broken by a fall of slate.
20	Lawrence Germanto.	Italian.	Miner.	37	M.	Charcoal No. 1.	Washington.	Collar bone broken by fall of coal.
20	Alexander Volscheek.	Slovak.	Miner.	31	M.	Irons.	Westmoreland.	Ankle broken by a fall of slate.
29	Peter Schlosky.	Russian.	Miner.	25	S.	Somers No. 4.	Fayette.	Two fingers cut off by a car.
21	James Cook.	American.	Machine runner.	20	M.	Somers No. 1.	Washington.	Injured by mining machine.
22	Hugh Lavery.	American.	Driver.	30	S.	Hazel Kirk.	Washington.	Foot bruised; caught by a car.
22	Thomas Patronie.	German.	Miner.	31	S.	Somers No. 1.	Fayette.	Collar bone and three ribs broken by a fall of coal.
31	James Gilchrist.	American.	Machine scraper.	26	S.	Arnold No. 1.	Fayette.	Feet injured by being caught in machine bitt.
Feb.								
31	Hugh Lavery.	American.	Company man.	24	S.	Fayette City.	Fayette.	Leg broken; struck by a mining machine.
31	Thomas J. Jones.	Welsh.	Miner.	58	S.	Ivill.	Washington.	Ankle bruised by a piece of slate sliding on it.
3	Thomas Drasbeth.	Slovak.	Miner.	22	M.	Bull.	Westmoreland.	Leg broken by a fall of slate.
4	George Holsak.	Slovak.	Miner.	24	M.	Redstone.	Fayette.	Leg broken by a fall of slate.
7	James Holland.	English.	Miner.	52	M.	Clinton.	Allegheny.	Leg broken by a fall of slate.
10	John Brown.	American.	Driver.	52	M.	Clinton.	Allegheny.	Injured by cars.
11	Samuel Gaverlap.	Slovak.	Miner.	25	S.	Manown.	Allegheny.	Leg broken by a fall of slate.
17	James Carney.	American.	Driver.	38	M.	Milesville.	Allegheny.	Foot injured; caught between cars.
24	Petro Pelicrine.	Italian.	Miner.	26	S.	Apello.	Allegheny.	Ankle sprained; caught between cars.
24	Stephen Robinson.	American.	Driver.	22	S.	Monah.	Fayette.	Injured by an explosion of fine damp.
24	Thomas Laws.	English.	Miner.	40	M.	Monah.	Allegheny.	Body crushed by a fall of coal.
6	David Marlin.	Pole.	Miner.	50	M.	Tremont.	Fayette.	Arm broken by coal from a blast.

6	John Hagar.	.....	American.	.....	Company man.	28	M.	Catsburg.	.....	Washington.	Slightly injured by an explosion of fire damp.
6	James Torment.	.....	English.	.....	Company man.	45	M.	Catsburg.	.....	Washington.	Seriously injured by an explosion of fire damp.
15	Rudolf Much.	.....	Italian.	.....	Miner.	24	S.	Mongah.	.....	Allegheny.	Injured by a fall of slate.
18	Bruce Feathers.	.....	American.	.....	Company man.	21	S.	Ellsworth No. 1.	.....	Washington.	Arm broken by falling down shaft.
19	William Hewitt.	.....	English.	.....	Miner.	58	M.	Catsburg.	.....	Allegheny.	Injured by a fall of slate.
25	Frank Segum.	.....	Pole.	.....	Miner.	38	M.	Milesville.	.....	Washington.	Injured by a fall of slate.
26	Joseph Sersneck.	.....	Austrian.	.....	Driver.	39	M.	Knob.	.....	Washington.	Leg broken by being caught between cars.
26	Oscar Webb.	.....	Finnlander.	.....	Machine runner.	39	M.	Tremont.	.....	Fayette.	Arm broken by a fall of slate.
27	George Leveske.	.....	Pole.	.....	Miner.	29	S.	Cincinnati.	.....	Washington.	Leg broken; struck by the dilly trip.
28	Frederick Hellman.	.....	Austrian.	.....	Miner.	28	S.	Camden.	.....	Allegheny.	Leg cut off by a fall of roof.
28	Rudolf Severy.	.....	Austrian.	.....	Miner.	26	S.	Camden.	.....	Allegheny.	Ribs broken by a fall of roof.
29	Vitru Polonis.	.....	Italian.	.....	Miner.	23	S.	Ivill.	.....	Washington.	Injured by a car.
29	Frank Cornia.	.....	Italian.	.....	Miner.	30	S.	Ivill.	.....	Washington.	Scalp injured by a fall of coal.
31	William Weller.	.....	American.	.....	Company man.	56	M.	Watson.	Upper.	Allegheny.	Ribs fractured and shoulder dislocated; struck by wheel.
3	John Danla.	.....	Italian.	.....	Miner.	27	S.	Hazel Kirk.	.....	Washington.	Leg broken by fall of slate.
4	Antonia Pehikus.	.....	Hungarian.	.....	Miner.	29	M.	Knob.	.....	Washington.	Head injured by a fall of slate.
4	Michael Haeck.	.....	Russian.	.....	Miner.	20	S.	Knob.	.....	Washington.	Leg broken by a fall of slate.
7	George Hauley.	.....	Slovak.	.....	Miner.	44	M.	Little Redstone.	.....	Fayette.	Foot injured by a fall of slate.
8	Joseph Suto.	.....	Slovak.	.....	Miner.	42	M.	Beaumont.	.....	Washington.	Arm broken by a fall of coal.
10	Joseph Matuse.	.....	Hungarian.	.....	Miner.	43	S.	Somers No. 2.	.....	Westmoreland.	Foot bruised by a fall of coal.
11	John Daniel.	.....	American.	.....	Miner.	64	M.	Ivill.	.....	Washington.	Law broken by a fall of coal and slate.
11	George Stupko.	.....	Hungarian.	.....	Miner.	45	M.	Somers No. 2.	.....	Westmoreland.	Injured by a fall of slate and coal.
11	George Perkins.	.....	American.	.....	Driver.	21	S.	Ellsworth No. 1.	.....	Washington.	Jaw broken; struck by the butt stick of a mule's harness.
14	John Butner.	.....	Hungarian.	.....	Miner.	42	M.	Crescent.	.....	Washington.	Injured by a fall of coal.
15	Stephen Lepiock.	.....	Hungarian.	.....	Machine scraper.	26	M.	Catsburg.	.....	Washington.	Injured by a fall of coal.
15	John Lesko.	.....	Slovak.	.....	Miner.	42	M.	Nottingham.	.....	Washington.	Injured by a fall of coal.
16	John Moller.	.....	Latvian.	.....	Miner.	49	S.	Namone.	.....	Washington.	Burned by powder from cartridge.
18	Roffner McNally.	.....	Italian.	.....	Driver.	26	M.	Charles.	.....	Allegheny.	Both legs injured by cars.
19	Angelo Marineti.	.....	Italian.	.....	Miner.	39	M.	Charles.	.....	Washington.	Both legs injured by cars.
22	Michael Bobistek.	.....	Slovak.	.....	Miner.	31	M.	Apollo.	.....	Fayette.	Foot dislocated by a fall of coal.
5	Frederick Collier.	.....	American.	.....	Driver.	24	M.	Gallatin.	.....	Allegheny.	Foot injured by a fall of slate.
6	John Dommnick.	.....	Italian.	.....	Miner.	28	M.	Schoenberger.	.....	Washington.	Leg broken by a fall of slate.
13	Michael Popit.	.....	Slovak.	.....	Miner.	22	S.	North Webster.	.....	Westmoreland.	Body bruised; hand and head cut by being caught between car and rib.
14	Joseph Shatto.	.....	Hungarian.	.....	Miner.	42	M.	Milesville.	.....	Allegheny.	Leg broken by a fall of coal and slate.
14	John Donnelly.	.....	Scotch.	.....	Miner.	40	S.	Milesville.	.....	Allegheny.	Injured; caught between cars.
21	Joseph Franciscony.	.....	Italian.	.....	Miner.	22	S.	Little Squaw.	.....	Washington.	Seriously injured by a fall of slate.
26	George Strizer.	.....	Slovak.	.....	Miner.	35	M.	Ellsworth No. 1.	.....	Washington.	Foot mashed by a fall of coal and slate.
26	John Ormick.	.....	Hungarian.	.....	Miner.	33	M.	Catsburg.	.....	Washington.	Body injured by a fall of coal.
28	John Jolia.	.....	Italian.	.....	Miner.	35	M.	Clyde.	.....	Washington.	Leg broken by a fall of slate.
28	Joseph Bigley.	.....	American.	.....	Miner.	51	S.	Somers No. 3.	.....	Westmoreland.	Leg broken by a fall of roof.
28	John Galy.	.....	Pole.	.....	Driver.	72	M.	Gallatin.	.....	Allegheny.	Foot injured by a fall of roof.
28	Michael Vanzo.	.....	Slovak.	.....	Driver.	20	S.	Milesville.	.....	Allegheny.	Collar bone broken by a mining machine.
29	Walter Ridgeway.	.....	American.	.....	Driver.	16	S.	Vesia No. 1.	.....	Washington.	Ankle fractured by cars.
29	Andrew Sallis.	.....	Slovak.	.....	Miner.	26	S.	North Webster.	.....	Westmoreland.	Back injured by fall of slate.
30	Louis Paring.	.....	German.	.....	Company man.	21	S.	Schoenberger.	.....	Westmoreland.	Leg bruised; caught between motor and door.
3	Frank Horlo.	.....	Slovak.	.....	Miner.	22	S.	Vielant.	.....	Washington.	Body bruised by a fall of slate.
3	Frank Farf.	.....	Pole.	.....	Miner.	23	S.	Eclipse.	.....	Washington.	Arm broken by a fall of slate.
3	Stephen Bowinskie.	.....	Pole.	.....	Miner.	22	S.	Gallatin.	.....	Allegheny.	Leg broken by a fall of slate.
4	John Seamer.	.....	Hungarian.	.....	Miner.	42	M.	Beaumont.	.....	Washington.	Thigh bruised by a fall of slate.
6	John Seamer.	.....	Hungarian.	.....	Miner.	35	M.	Beaumont.	.....	Washington.	Thigh bruised by a fall of slate.
10	Frank Sweeney.	.....	American.	.....	Miner.	21	S.	Vielant.	.....	Washington.	Collar bone broken by being run over by car.

April

May

June

TABLE V—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
4	Henry Livingston,	American,	Driver,	18	S.	Catsburg,	Washington, ..	Injured; caught between car and post.
5	André Touchet,	Slovak,	Miner,	31	M.	Baumer,	Washington, ..	Injured by a fall of coal and slate.
6	Peter Whelan,	Scottish,	Miner,	45	M.	Monsah,	Washington, ..	Injured by a fall of roof coal and slate.
9	Alphonse Pagrula,	Italian,	Miner,	28	M.	Schoenberger, ..	Allegheny,	Leg broken by a fall of slate.
12	John Ingram Burkhardt,	American,	Driver,	32	M.	Schoenberger, ..	Washington, ..	Two fingers on right hand mashed by car.
12	William Burkhardt,	German,	Driver,	19	S.	Acmé,	Washington, ..	Hip dislocated by being caught by cars.
12	C. Keshet,	Scottish,	Miner,	25	S.	Charleoi No. 1, ..	Washington, ..	Toe cut off by a fall of slate.
15	John Bergsola,	Italian,	Miner,	31	M.	Schoenberger, ..	Washington, ..	Thumb cut off by an axe.
17	W. L. Malze,	Scottish,	Company man, ..	35	M.	Schoenberger, ..	Allegheny,	Injured; caught by dilly trip.
19	William Gauer,	Russian,	Miner,	40	M.	Vesta No. 2,	Washington, ..	Leg broken by a fall of slate.
20	William Gaster,	American,	Driver,	42	M.	Blanche,	Washington, ..	Injured; caught between car and rib.
22	John Todd,	Italian,	Miner,	27	M.	Gallatin,	Allegheny,	Injured by a fall of coal.

Second Bituminous District.

ALLEGHENY, INDIANA AND WESTMORELAND COUNTIES.

Greensburg, Pa., March 24, 1903.

Hon. James W. Latta, Secretary of Internal Affairs:

Sir: I have the honor to herewith submit my report as Inspector of Mines for the Second Bituminous District for the year ending December 31, 1902, in compliance with Section 2 of Article 10 of the Bituminous Mining Act, approved the 15th day of May, 1893.

The coal and coke trade in this district is still on the increase. In 1901 the total production was 8,222,731 tons of coal and 1,498,520 tons of coke, while in 1902 the production was 11,031,423 tons of coal and 1,996,906 of coke, an increase of 2,808,692 tons of coal and 498,386 tons of coke over the output of 1901.

There has also been an increase in the number of persons employed. In 1901 the number was 11,517. In 1902, 14,516, an increase of 2,999.

I regret to report 42 fatal accidents, an increase of 13 over 1901. As a result of these fatalities twenty-six wives were made widows and seventy-three children fatherless.

The number of non-fatal accidents was 67, showing a decrease of 15 from the year 1901.

Several of the fatal accidents might have been prevented if the unfortunate persons had exercised ordinary care. The same may be said of the non-fatal accidents. Quite a number were due to carelessness on the part of the injured persons.

I am pleased to report that the condition of the mines has been improved, with but few exceptions. This is especially true in regard to ventilation. Three furnaces and seven fans were put into operation, and two small fans have been replaced by larger ones. Three new air shafts have been sunk where the old ones proved to be too small after the workings were extended.

The report contains the usual tables and statistics, with a brief description of the mines, together with the most important improvements made; also a description of the fatal accidents and a report of the annual examination of applicants for mine foremen certificates.

One violation of the mining law was reported to me during the year,

upon the basis of which I made an information against one Frank Canepeli, a miner, charging him with unlocking and lighting his safety lamp in a portion of the Denmark mine, in which locked safety lamps were used, a statement of which is also made a part of this report.

Respectfully submitted,

C. B. ROSS,
Inspector.

SUMMARY OF STATISTICS FOR 1902.

Number of mines in district,	81
Number of mines in operation during 1902,	77
Number of tons of coal produced,	11,031,423
Number of tons shipped to market,	7,675,700
Number of tons sold at mines to local trade,	73,839
Number of tons consumed at mines in generating steam and heat,	228,419
Number of coke ovens in the district,	4,548
Number of coke ovens in operation during 1902,	4,324
Number of tons of coke produced,	1,996,906
Number of tons of coal used in manufacture of coke,	3,053,465
Number of tons produced by pick mining,	9,048,595
Number of tons produced by compressed air machines, ...	948,417
Number of tons produced by electrical machines,	1,034,411
Number of persons employed inside the mines,	11,317
Number of persons employed outside, including coke workers,	3,199
Number of persons employed at manufacture of coke, ...	1,545
Number of fatal accidents inside the mines,	40
Number of tons produced for each fatal accident inside, .	275,785 +
Number of persons employed per fatal accident inside, ...	362 +
Number of fatal accidents outside,	2
Number of persons employed per fatal accident outside, .	7,258
Number of wives made widows by fatal accidents,	26
Number of children orphaned by fatal accidents,	73
Number of non-fatal accidents inside of mines,	64
Number of persons employed per non-fatal accident in- side,	226 +
Number of non-fatal accidents outside,	3
Number of persons employed per non-fatal accident out- side,	4,839—
Number of steam locomotives used inside,	1
Number of compressed air locomotives used inside,	3
Number of electric motors used inside,	11

Number of fans used for ventilation,	50
Number of furnaces used for ventilation,	20
Number of gaseous mines in operation during 1902,	27
Number of non-gaseous mines in operation during 1902..	50
Number of new mines opened in 1902,	8
Number of old mines abandoned during 1902,	2

A. Production of Coal During the Year 1902.

Names of Companies.	Tons.
Keystone Coal and Coke Co.,	2,156,657
Westmoreland Coal Co.,	1,568,748
Penn Gas Coal Co.,	715,298
Jamison Coal and Coke Co.,	642,991
Loyalhanna Coal and Coke Co.,	504,034
Hostetter Connellsville Coke Co.,	560,000
American Coke Co.,	459,740
Atlantic Crushed Coke Co.,	159,041
Ligonier Coal Co.,	28,063
Burrell Coal Co.,	62,111
McCreary Coke Co.,	151,444
Blairsville Coke Co.,	33,100
Superior Coal and Coke Co.,	175,905
Pittsburg and Baltimore Coal Co.,	241,005
Ocean Coal Co.,	196,869
Maher Coal and Coke Co.,	49,758
Manor Gas Coal Co.,	321,673
Spring Hill Gas Coal Co.,	115,990
W. B. Skelly Coal Co.,	89,657
Penn Manor Shaft Co.,	100,421
Alexandria Coal Co.,	296,035
Donohoe Coal and Coke Co.,	215,691
Huron Coal Co.,	153,060
Latrobe Coal Co.,	305,000
H. C. Frick Coke Co.,	138,716
Saxman Coal and Coke Co.,	127,624
Derry Coal and Coke Co.,	273,586
Bessemer Coke Co.,	212,757
Millwood Coal and Coke Co.,	110,597
Reese-Hammond Fire Brick Co.,	19,262
Bolivar Coal and Coke Co.,	24,500
Harris Coal and Coke Co.,	33,299
Elkins Gas Coal Co.,	259,512

American Steel Hoop Co.,	144,000
Ray Coal Co.,	62,539
Robert Smith,	50,820
Graff Coal Co.,	60,000
Dixon Brothers,	34,025
Glenmore Coal and Coke Co.,	27,600
Joseph Wharton,	45,086
Mitchell Watson Coal and Coke Co.,	5,164
Bowman Coal Mining Co.,	28,940
Edri Coal Co.,	10,704
Johnstown Coal Co.,	45,060
Latrobe, Connellsville Coal and Coke Co.,	8,415
Peters Paper Co.,	6,926
Total,	11,031,423

Production by Counties.	Tons.
Allegheny,	115,990
Indiana,	669,154
Westmoreland,	10,246,279
Total,	11,031,423

C. Classification of Fatal Accidents for the Year 1902.

	Inside of Mines.										Outside of Mines.										Grand Total.	
	By Falls of			By Falling into							Total inside.			Total outside.								
	Coal	State.	Roof.	By mine cars.	By explosion of gas.	Smothered by gas.	Powder and dynamite.	By blasts, etc.	Shafts.	Slopes.	Minerways, breasters, etc.	Crushed at batteries.	By mules.	Struck by coal, etc.	Miscellaneous causes.		By cars.	By machinery.	By suffocation.	By bullet explosions.	Miscellaneous causes.	
January.	1	1																				
February.	1	1																				
March.	1	1																				
April.	1	1																				
May.	1	1		1																		
June.	1	1																				
July.	1	1																				
August.	1	1																				
September.	1	1		1																		
October.	1	1																				
November.	1	1																				
December.	1	1																				
Totals.	10	10	6	1	1	1	1	1	1	1	1	1	1	1	1	10	1	1	1	1	1	42

D. Classification of Non-fatal Accidents for the Year 1902.

	Inside of Mines.										Outside of Mines.					Grand total.				
	By Falls of			By Falling into				By blasts, etc.	Powder and dynamite.	Smothered by gas.	By explosion of gas.	By mine cars.	Total inside.	By cars.	By machinery.		By suffocation.	By boiler explosions.	Miscellaneous causes.	Total outside.
	Coal.	State.	Roof.	Shafts.	Slopes.	Manways, breasts, etc.	Crushed at batteries.														By mules.	Suffocated by coal, etc.	Miscellaneous causes.
January.	1	1	2									1	9	1					1	7
February.	2	1										1	4	1					1	7
March.		1											1							1
April.	1	1	1										10							10
May.	1	2						3					3							3
June.	1	1											5							5
July.		3										1	2							3
August.		3										4	3							7
September.	1	2										1	2							3
October.	1	1						2				1	1							4
November.	1	2										2	1							4
December.		1										1	1							3
Totals.	10	24	3	—	—	—	—	5	—	—	—	3	62	3	—	—	—	12	5	67

E. Occupations of Employees Killed or Fatally Injured Inside and Outside the Mines of the Second Bituminous District During 1902.

Months.	Inside.										Outside.											
	Mine foremen.	Assistant mine foremen.	Fire bosses.	Miners.	Machine runners.	Machine loaders.	Machine scrapers.	Drivers and runners.	Poor boys and helpers.	Company men.	All other employees.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	Coke employees.	Book-keepers and clerks.	All other employees.	Total outside.	Grand total.	
January.				4	1							6								1	7	13
February.				1							1	2									1	3
March.																						
April.																						
May.																						
June.				1																		
July.				2																		
August.				1																		
September.																						
October.								1			1	2										
November.																						
December.																						
Totals.	24	1		13	1	2		1			2	40								13	63	103

G. Nationality of Employees Killed or Fatally Injured Inside and Outside the Mines During 1902.

	Americans.	English.	Welsh.	Scotch.	Germans.	Poles.	Italians.	Slavonians.	Lithuanians.	Austrians.	Russians.	Polesians.	Grand total.
January,				1				1					
February,													
March,	1					1	1	1	1	1			
April,							1						
May,													
June,		1	1			2				1			
July,							3						
August,					1		2			1			
September,	1				1	1							
October,	1						1			1		1	
November,		1									1		
December,						1							
Totals,	5	2	1	1	2	5	8	9	1	5	2	1	41

H. Nationality of Employees Severely Injured Inside and Outside the Mines During 1902.

	Americans.	English.	Scotch.	Irish.	Germans.	Poles.	Hungarians.	Italians.	Slavonians.	Austrians.	Russians.	Swedcs.	Polesians.	Grand total.
January,	4					1								
February,		1	1			1				2				
March,						1			1			1	1	
April,	2			2		3		1	1	1				
May,	3				1			1	1	1				
June,									1				1	
July,	2			1			1	1	1					
August,			1						2					
September,	1	1									1	1		
October,	1	1			1				3		1			
November,	1	1			1			1						
December,		1					1	1	1					
Totals,	14	5	4	3	3	5	3	10	10	4	2	2	2	67

I. Giving names of operators and mines, kind of openings, type and size of fans; size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each employe per minute in Second Bituminous District for the year 1902.

Names of Operators and Mines.	Kind of opening.	Gaseous or non-gaseous.	Method of ventilation.	Diameter and width of fan In feet.	Water Gauge developed—in Inches.	Name of fan.	Power used.	Area of furnace bars in square feet.	Number of air splits of air currents.	Number of cubic feet of air per minute entering the mine at inlet.	Total quantity of air per minute circulating in all the splits in cubic feet.	Number of cubic feet per minute passing out at out- let.	Number of persons employed inside.	Average number of cubic feet per minute provided for each person.
Keystone Coal and Coke Co.	Slope.	Non-gas.	Fan.	12 x 3½	1.3	Guibal.	Steam.	.....	1	45,000	45,000	97,700	131	371.9
	Slope.	Non-gas.	Fan.	16 x 4½	1.2	Guibal.	Steam.	.....	1	50,900	50,900	76,300	260	293.4
	Slope.	Non-gas.	Fan.	16 x 4½	1.2	Murphy.	Steam.	.....	1	21,600	21,600	12,140	58	771.4
	Drift.	Non-gas.	Fan.	16 x 7	1.2	Guibal.	Steam.	.....	1	75,000	75,000	36,800	282	268.7
	Slope.	Non-gas.	Fan.	13½ x 8	1.3	Capell.	Steam.	.....	1	120,000	120,000	97,480	231	338.7
	Slope.	Non-gas.	Fan.	25 x 8	1.7	Guibal.	Steam.	.....	7	97,500	45,200	75,360	283	334.5
	Slope.	Non-gas.	Fan.	15 x 8	1.5	Guibal.	Steam.	.....	6	117,000	88,620	106,800	233	502.1
	Drift.	Non-gas.	Fan.	28 x 6	.5	Guibal.	Steam.	.....	5	92,400	75,040	102,000	235	303.2
	Slope.	Non-gas.	Fan.	12 x 3	2	Stein.	Steam.	.....	6	26,400	29,400	41,000	200	147
	Drift.	Non-gas.	Fan.	12 x 3½	1.25	Guibal.	Steam.	.....	3	56,000	32,700	44,000	171	327.5
	Shaft.	Non-gas.	Rail by steam.	.....	.....	.....	Steam.	.....	.....	6,750	6,750	2,600	11	613.6
	Drift.	Non-gas.	Fan.	10 x 5	.....	Brazil.	Steam.	.....	.....	.....	.....	.....	20	.....
	Shaft.	Non-gas.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Shaft.	Non-gas.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Westmoreland Coal Co.	Drift.	Gaseous.	Fan.	25 x 8	2.2	Guibal.	Steam.	.....	8	105,920	105,920	186,000	573	289.5
	Slope.	Gaseous.	Fan.	20 x 9	1.4	Guibal.	Steam.	.....	1	200,800	100,800	97,200	268	543.7
	Slope.	Non-gas.	Fan.	7 x 3½	.....	Guibal.	Steam.	.....	1	27,020	27,020	32,300	148	169.8
	Shaft.	Gaseous.	Fan.	21 x 10	1.5	Guibal.	Steam.	.....	6	120,720	115,400	202,100	241	348.8
Penn Gas Coal Co.	Drift.	Gaseous.	Furnace.	18 x 6	.....	Guibal.	Steam.	48	.....	20,800	20,800	24,000	94	271.2
	Shaft.	Gaseous.	Fan.	15 x 6	.....	Guibal.	Steam.	.....	.....	42,700	42,700	52,900	152	280.6
	Shaft.	Gaseous.	Fan.	15 x 7	3.5	Capell.	Steam.	.....	.....	100,500	93,000	124,000	216	252.4
	Slope.	Gaseous.	Fan.	14 x 6	2.9	Capell.	Electric- ity.	.....	4	101,000	62,500	112,500	228	424.3

Jamison Coal and Coke Co.									
Jamison No. 1.	Slope.	Gaseous.	Fan.	12 x 3½	1	Brazil.	Steam.	45,500	62,400
Jamison No. 2.	Drift.	Gaseous.	Fan.	10 x 3	3	Guibal.	Steam.	25,150	44,000
Jamison No. 3.	Shaft.	Gaseous.	Fan.	13 x 6	1.2	Capell.	Steam.	79,800	88,000
Jamison No. 4.	Shaft.	Gaseous.	Fan.	13 x 6	.....	Capell.	Steam.	24,000	22,800
Loyalhanna Coal and Coke Co.									
Loyalhanna Nos. 1 and 2.	Shafts.	Gaseous.	Fan.	18 x 6	.....	Brazil.	Steam.	68,000	50,400
Pandora.	Shaft.	Gaseous.	Fan.	25 x 8	.....	Guibal.	Steam.	70,000	81,000
Hostetter Connellsville Coke Co.									
Hostetter.	Slope.	Gaseous.	Fan.	16 x 4½	.6	Guibal.	Steam.	75,000	65,360
Whitney.	Slope.	Gaseous.	Fan.	16 x 4½	.4	Guibal.	Steam.	71,440	66,880
American Coke Co.									
Puritan, or Bagdaley.	Slope.	Gaseous.	Fan.	20 x 6	1.7	Guibal.	Steam.	113,400	83,100
Dorothy.	Shaft.	Gaseous.	Fan.	20 x 6	.5	Guibal.	Steam.	94,500	46,900
Atlantic Crushed Coke Co.									
Atlantic No. 1.	Drift.	Non-gas.	Natural.	.....	.....	.....	.....	6,500	11,200
Atlantic No. 2.	Slope.	Gaseous.	Fan.	6 x 4½	.5	Capell.	Steam.	52,000	58,800
Atlantic No. 3.*	Shaft.	Non-gas.	.....	.....	.....	.....	.....	.....	.....
Ligonier Coal Co.									
S. H. Smith.	Drift.	Non-gas.	Furnace.	12 x 4	.....	Guibal.	Steam.	8,000	11,050
Ligonier No. 2.	Shaft.	Non-gas.	Fan.	.....	.....	.....	.....	27,500	29,650
Burrell Coal Co.									
Burrell No. 1.†	Drift.	Non-gas.	Furnace.	.....	.....	.....	.....	2,000	12,800
Burrell No. 2.	Drift.	Non-gas.	Furnace.	.....	.....	.....	.....	21,000	26,400
McCreary Coke Co.									
Graceton No. 1.	Drift.	Non-gas.	Fan.	9 x 3½	.....	Brazil.	Steam.	24,000	25,600
Graceton No. 2.	Drift.	Non-gas.	Fan.	11 x 3½	.....	Brazil.	Steam.	31,600	36,000
Blairsville Coke Co.									
Graff.	Drift.	Non-gas.	Furnace.	.....	.....	.....	.....	12,600	10,700
Graff No. 2.	Drift.	Non-gas.	Natural.	.....	.....	.....	.....	3,840	3,600
Superior Coal and Coke Co.									
Superior No. 1.	Shaft.	Non-gas.	Fan.	12 x 3½	.4	Brazil.	Steam.	70,200	59,040
Superior No. 2.	Drift.	Non-gas.	.....	.....	.....	.....	.....	.....	.....
Pittsburg and Baltimore Coal Co.									
Pittsburg No. 1.	Slope.	Non-gas.	Fan.	12 x 8	.....	Robinson.	Steam.	40,200	39,350
Baltimore No. 2.*	Shaft.	Non-gas.	.....	.....	.....	.....	.....	.....	.....
Ocean Coal Co.									
Ocean Nos. 1 and 2.	Shafts.	Gaseous.	Fan.	15 x 7	2	Capell.	Steam.	202,500	94,680
Maher Coal and Coke Co.									
Maher No. 3.	Drift.	Non-gas.	Furnace.	.....	.....	.....	.....	12,600	10,700

*In course of construction.

†Abandoned.

TABLE 1--Continued.

Name of Owners and Mines	Kind of venting	Gaseous or non-gaseous	Method of working	Length and width of fan in feet	Water gauge developed in inches	Name of fan	Power used	Area of furnace bars in square feet	Number of air splits of air currents	Number of cubic foot of air per minute entering the mine at inlet	Total quantity of air per the splits in cubic feet	Number of cubic foot per minute passing out at outlet	Number of persons employed inside	Average number of cubic foot per minute provided for each person
Maier Gas Coal Co. Demmitt	Slope	Gaseous	Fan	12 x 3½	1.4	Garbal	Steam		8	75,000	62,000	166,600	306	194.4
Seaton Hill Coal and Oil Co. Spring Hill	Drift	Non-gas	Furnace					42 36	3	65,34	193,125	153,125		
W. P. Small Coal Co. Elizabeth	Drift	Non-gas	Furnace					48	12	16,800	16,800	23,400	110	152.7
Tom Miner Coal Co. Tom Miner	Shaft	Gaseous	Fan	20 x 6	2	Garbal	Steam		2	75,900	75,900	68,140	157	483.4
Alexander Coal Co. Axtell	Slope	Non-gas	Fans	12 x 6½ 15 x 4	1.1 1	Garbal. Garbal.	Steam		5	17,000	89,460	90,360	209	339.5
Poplar Coal and Oil Co. Dewey	Drift	Non-gas	Fan	14 x 5	1	Capell	Steam		3	114,000	78,000	117,400	156	739.7
Hunt Hunt	Drift	Non-gas	Fan	10 x 3	.5	Brass	Steam		3	55,600	54,400	54,400	187	290.4
Lafayette Coal Co. Lafayette	Slope	Gaseous	Fan	20 x 6	.4	Garbal	Steam		4	87,000	79,800	68,000	255	330.5
W. C. Thompson Monastery	Slope	Gaseous	Fan	15 x 1	2.2	Garbal	Steam		2	31,400	28,200	41,200	194	301.9
Shannon Coal and Oil Co. M. Saxman	Shaft	Non-gas	Fan	12 x 3½	.4	Brass	Steam		2	48,000	56,600	52,100	131	370.9

Derry Coal and Coke Co.	Shaft.	Gaseous.	Fan.	20 x 6	.....	Guibal.	.....	Steam.	.....	2	70,000	47,400	59,800	241	290.4
Derry, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bessemer Coke Co.	Slope.	Non-gas.	Fan.	18 x 5½	.5	Brazil.	.....	Steam.	.....	2	47,500	47,500	36,000	213	323
St. Clair, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Millwood Coal and Coke Co.	Shaft.	Gaseous.	Fan.	13½ x 5	1	Capell.	.....	Steam.	.....	2	56,520	56,520	66,000	119	474.9
Millwood, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Reese-Hammond Fire Brick Co.	Drift.	Non-gas.	Natural.	.....	.....	.....	.....	.....	.....	1	10,800	10,800	12,600	20	540
Indiana, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bellivar Coal and Coke Co.	Drift.	Non-gas.	Furnace.	.....	.....	.....	.....	.....	.....	56	1	7,200	4,160	33	218.1
Lothrop, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Harris Coal and Coke Co.	Drift.	Non-gas.	Furnace.	.....	.....	.....	.....	.....	.....	48	1	16,500	14,400	52	317.3
Lincoln, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Elkins Gas Coal Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lyons Run,	Drift.	Non-gas.	Furnace.	.....	.....	.....	.....	.....	.....	90 } 60 }	5	49,280	60,000	280	176
American Steel Hoop Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Isabella,	Slope.	Gaseous.	Fan.	12 x 7	1.5	Guibal.	.....	Steam.	.....	1	31,950	31,500	60,500	124	257.6
Ray, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ray Coal Co.	Drift.	Non-gas.	Furnace.	.....	.....	.....	.....	.....	.....	30	2	26,800	19,800	53	605.6
Robert Smith, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Smith,	Drift.	Non-gas.	Furnace.	.....	.....	.....	.....	.....	.....	30	1	26,560	32,100	68	395
Blacklick, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Graft Coal Co.	Drift.	Non-gas.	Furnace.	.....	.....	.....	.....	.....	.....	30	1	16,410	19,060	81	202.7
Blacklick, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dixon Brothers,	Drift.	Non-gas.	Furnace.	.....	.....	.....	.....	.....	.....	48	1	12,000	13,200	31	387
Glenmore Coal and Coke Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tearing Run,	Drift.	Non-gas.	Furnace.	.....	.....	.....	.....	.....	.....	30	1	4,480	5,000	40	112
Joseph Wharton, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mitchell,	Drift.	Non-gas.	Fan.	10 x 3	.....	Brazil.	.....	Steam.	.....	1	18,000	18,000	15,600	198	90.9
Mitchell-Watson Coal and Coke Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mitchell-Watson No. 1,	Drift.	Non-gas.	Natural.	.....	.....	.....	.....	.....	.....	1	1,920	1,920	2,970	.....	.....
Bowman Coal Mining Co.	Drift.	Non-gas.	Furnace.	.....	.....	.....	.....	.....	.....	24	1	11,600	12,000	42	276.2
Bowman, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Edri Coal Co.	Drift.	Non-gas.	Furnace.	.....	.....	.....	.....	.....	.....	20	1	9,210	10,800	34	271.7
Edri, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Johnstown Coal Co.	Drift.	Non-gas.	Fan.	12 x 3	.....	Brazil.	.....	Steam.	.....	2	34,000	31,000	36,100	57	586.4
Cramer, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

J. Names of mines using coal cutting machines, names of machines, power used, geological and local names of seams, thickest and thinnest seams where machines are used, and the approximate number of tons produced by machines during 1902.

Names of Mines.	Kind of opening.	Gaseous or non-gaseous.	Name and Number of Machines in Use.						Total machines used.	Power used by machines.	Geological and local name of seam.	Average thickness in inches.			Height of seam in inches.	Approximate number of tons produced by machines.
			DeCroll.	Sullivan.	Harrison.	Jeffrey.	Morgan-Radner.	Goodman.				Thinnest.	Thickest.			
Export.	D pit.	Gaseous.	5						10	Electricity.	Pittsburg.	50	69	69	375,000	
Larimer.	Shaft.	Gaseous.							9	Electricity.	Pittsburg.	72	66	66	276,300	
Westmoreland.	Shaft.	Gaseous.							9	Compressed air.	Pittsburg.	72	66	66	251,000	
No. 2 Penn Gas.	Slope.	Non-gas.							8	Electricity.	Pittsburg.	66	66	66	112,481	
Ocean Nos. 1 and 2.	Slope.	Gaseous.	6	6					20	Compressed air.	Pittsburg.	66	66	60	135,261	
Baltimore No. 1.	Slope.	Non-gas.			1				7	Electricity.	Pittsburg.	84	78	60	151,580	
Penn Manor.	Shaft.	Gaseous.	12	6					19	Electricity.	Pittsburg.	84	78	60	171,850	
Jameson No. 3.	Shaft.	Non-gas.							9	Compressed air.	Pittsburg.	78	76	60	29,000	
Jameson No. 4.	Shaft.	Gaseous.							9	Compressed air.	Pittsburg.	81	84	76	150,000	
Salem.	Drift.	Non-gas.	3	2					5	Compressed air.	Pittsburg.	86	84	78	24,000	
Perry.	Shaft.	Gaseous.	1	4					11	Electricity.	Pittsburg.	90	90	84	151,317	
Paundra.	Shaft.	Gaseous.	2	4					4	Electricity.	Pittsburg.	60	48	48	40,000	
Graceton No. 1.	Drift.	Non-gas.	2						3	Compressed air.	Pittsburg.	33	35	30	21,000	
Graceton No. 2.	Drift.	Non-gas.	26						26	Compressed air.	D, or Lower Freeport.	38	35	36	50,000	
Totals.			52	60	11	29	14	8	160						1,982,828	

Description of Fatal Accidents that Occurred During the Year.

Paul Kruspir was so seriously injured by a fall of coal in Jamison No. 3 mine, January 11, that death resulted on the 14th inst. The accident occurred in the south main entry parallel. Kruspir was employed as an entry driver, and had been warned by a fellow workmen of the dangerous condition of the coal shortly before it fell.

Daniel Hamilton, a miner boy, was instantly killed by a fall of coal at face of room in the Madison mine, January 22. He was at work with an older brother, and at the time of the accident was loading a car. Upon examination I found that the coal had not been spragged as it should have been. I was informed by the mine foreman that he had frequently called Hamilton's attention to his neglect in this particular, and had done so as late as the date before the accident.

Norgles Yeronius was so seriously injured in Export mine, February 1, by being caught in a mining machine, that death resulted on the 6th instant. Yeronius was employed as a machine runner and had undercut a proper distance and was then backing out when he stepped upon the machine to loosen the front jack. His foot slipped, allowing the bit chain to come in contact with his pantaloons and draw his leg between the chain and machine frame, thereby crushing it, which resulted in his death.

Bartol Ansets was seriously injured in Denmark mine, February 10, by a fall of slate and death resulted on the 12th inst. The accident occurred in pillar workings and was the result of not spragging the coal. The coal had been undermined to a depth of about two and one-half feet and for a distance of nine feet. Ansets was passing the face of the coal when it suddenly fell.

Mike Pepsu was so seriously injured in Jamison No. 3 mine, February 12, by a fall of coal that death resulted on the 12th inst. The accident occurred in No. 1 entry east, where he was employed as an entry driver.

Edward McIntyre was instantly killed in the Greensburg No. 2 mine, March 10, by a fall of coal. He was on his way out of the mine, and was passing along No. 7 cross entry, when a piece of coal fell from the roof killing him.

Ignats Jimbo was so seriously injured in Jamison No. 3 mine, March 12, by a fall of slate that death resulted on April 4. He was loading a car of slate which he had taken down the day before. The piece which killed him was partly cut off by a slip, the existence of which was not perceptible until after it fell.

Joseph Sassi was instantly killed in the Ocean No. 1 mine, April 7, by a fall of slate, at the face of No. 26 entry north. He had been

told but a short time before the fall by a fire boss to put a post under the slate, but failed to carry out the instructions.

Frank Woliff was instantly killed in the Alexandria mine, April 16, by a fall of slate. He was engaged in loading a car and told a man who worked with him to cut a post and set it under the slate while he loaded the car. The man suggested that Woliff set the post, but he refused, and while he was preparing the post, the slate fell upon Woliff.

Henry A. Dunn was instantly killed by a fall of slate at face of entry in the Penn Gas No. 2 mine, May 8.

Daniel Greek was injured by a fall of slate at face of pillar in Denmark mine, May 8. The injury proved fatal June 15.

Frank Nowalk was instantly killed in the Alexandria mine by a fall of slate, May 12. The mine foreman was in his room but a short time before the accident occurred, and noticed that the slate was loose and told Nowalk to secure it with posts until he loaded the loose coal from under it. Nowalk failed to carry out his instructions and lost his life.

Martin Nokovich was so seriously injured by being caught between mine car and roof, in the Superior No. 1 mine, May 22, that death resulted the following day. Nokovich was at work in No. 5 parallel entry and had loaded his last wagon and started it down the entry. He boarded the car, evidently intending to stop it at the chute. In this he failed, as the car ran on and collided with two other cars standing on No. 5 entry at No. 5 room, and the rear end of the car on which Nokovich was standing raised up, fastening him between it and the roof, causing his death.

Joseph Rushnack was instantly killed by a fall of slate at face of room in the Jamison No. 3 mine, May 27. He was taking the slate down for the purpose of making the place safe when the accident occurred.

Charles Crupell was instantly killed by falling from an ascending cage in the Jamison No. 3 mine, May 31. Crupell had worked in this mine until May 3, when he left, but returned to get his pay on the day the accident occurred. Thomas Yessen, who had also previously worked in this mine, was with him. By some means Crupell lost his balance and fell against the side of shaft, was dragged through between the shaft and cage and fell to the bottom, a distance of about thirty-five feet.

Bartolo Domenegatto was instantly killed by a fall of slate at face of room in the Westmoreland shaft mine, June 3.

Andrew Metrick was fatally injured while at work in the Jamison No. 3 mine, June 14, by a fall of slate; death resulted in twenty minutes. The accident occurred in a room where he and his brother were engaged in taking a "slab" off a pillar.

Nicol Guiseppi was fatally injured while at work in the Millwood mine, June 16, by a fall of slate. Death resulted in twelve hours. The accident occurred in pillar workings.

Peter Rosetti was so seriously injured by a fall of slate at face of room in the Isabella mine, June 19, that death resulted on the 30th inst. He had been warned in the morning by the fire boss as to the dangerous condition of the slate in his room, who ordered him to secure it with timber. The fire boss marked with chalk the places where the timber should be set, but Rosetti failed to heed the warning.

Benjamin Gause, a miner boy, was so seriously injured by a fall of slate in the Baltimore No. 1 mine, June 23, that death resulted on the 25th inst. The accident occurred at face of room, where the boy was at work with his father.

Daniel Devey was fatally injured while at work in the Greensburg No. 2 mine, June 30, by a fall of slate. Death resulted in thirty minutes. The accident occurred in pillar workings, where he was drawing timber.

Frank Weiss was injured by a fall of coal at face of room in Penn Gas No. 5 mine, July 18. The injury proved fatal August 4.

Nickel Jim was so seriously injured by a fall of coal in Jamison No. 2 mine, August 7, that death resulted on the 9th inst. The accident occurred at face of room and was caused by his failing to sprag the coal.

Michael Barno was instantly killed on August 8 by a fall of roof in the Graceton No. 1 mine. The accident occurred in pillar workings.

Frank Stepneck was fatally injured while at work in the Claridge mine, August 11, by a fall of coal. Death resulted in ten minutes. The accident occurred in the pillar workings.

Musi Angelo was instantly killed by a fall of roof in the Millwood mine, August 13. The accident occurred in the pillar workings where he was engaged in drawing timber.

George Uhas was instantly killed by a fall of roof in pillar workings in the Puritan mine, August 23. Two roadmen went into the place and were preparing to lay a turn in the road and Uhas and his partner commenced to set posts. The roadmen heard the roof working and told Uhas it was not safe, but he insisted that it was. They then went back a short distance and called to Uhas to come, as did also Pohollo, his partner, and Edward Goodman, a driver, but he paid no attention to their warnings, when suddenly the roof fell, crushing him beneath it.

Edward Higgins was injured by a fall of roof at face of room in Greensburg No. 3 mine, August 28. The injury proved fatal September 9.

John Bitner was instantly killed while oiling an engine that operates the coke crusher at the Graceton No. 2 mine, August 30. His clothes were caught by a set screw in the shaft.

Thomas Smith was instantly killed by being struck by a descending cage at the top landing at Jamison No. 4 mine, September 4. Smith was employed to assist in dumping coal. One cage only was used for hoisting at this time. The other cage was so arranged as to hang on the rope three and one-half feet above the top landing when the one in use was on the bottom of shaft. This was done in order to prevent cage from reaching the bottom, which was not yet completed, while the one in use was landed properly at top landing. Smith lay down on top landing and was looking down at the engineers, who were doing some work on the ground landing. While in this position, a signal from below was given to hoist and the descending cage struck him on the back of the head, killing him instantly.

Jacob Mitinger was injured by a fall of coal in pillar workings in Greensburg No. 3 mine, September 4. He was undermining the coal at the time and had the coal properly spragged, but the coal, being of a soft nature, broke off near a sprag, fell on him and injured him so that he died on the 6th inst.

Andrew Kroul was fatally injured by a fall of slate at face of room in Lyons Run Mine, September 10. Death resulted in three hours.

Frank Licar was instantly killed by a fall of coal at face of room in the Lyons Run mine, October 9.

Ross Lee was suffocated by fumes from a dynamite blast in a new air shaft at Penn Gas No. 2 mine, October 9.

Anthony Siaranie was instantly killed by a fall of slate in the Jamison No. 1 mine, October 10. The accident occurred at face of room.

Frank Weaver was fatally injured by a fall of slate at face of room in the Penn Gas No. 2 mine, October 11. Death resulted in one hour.

A. F. Anderson was instantly killed by being run over by a car in the Baltimore mine No. 1, October 24. Anderson was employed as a driver. The supposition is that he was letting the car down the chute by walking in front of it, when he slipped and fell and the car passed over him.

Michael Fox was instantly killed by a fall of roof in the Loyalhanna No. 1 mine, November 7. The accident occurred in pillar workings.

Frank Allegrinni was instantly killed by a fall of slate at face of room in the Loyalhanna No. 1 mine, November 12.

Andrew Morris was so seriously injured by a fall of coal and slate in No. 5 Penn Gas mine, November 22, that death resulted on the 26th inst.

Peter Viskoski was injured by a fall of slate in pillar workings in

the Penn Manor mine, December 4. The injury proved fatal on the 21st.

Mike Kushinsky was fatally injured by a fall of roof in the Monastery mine, December 5. Death resulted in four hours. The accident occurred in pillar workings.

Commonwealth of Pa.	{	In the Court of Quarter Sessions of West-
v.		moreland county, Pa.
Frank Canepeli.		No. 20 May Term, 1902.
		Charge, violating mining laws. C. B. Ross, Inspector, prosecutor.

February 10, 1902, I made information against Frank Canepeli before Jacob Hoffer, justice of the peace, in the borough of Greensburg, charging him with the following offences:

That at the coal mines of the Manor Gas Coal Company, located at Claridge, in the township of Penn, county of Westmoreland, on Monday, January 20, 1902, said defendant, Frank Canepeli, being a miner at work in said mine on the entry where none but locked safety lamps were allowed to be used, did intentionally and carelessly use an open lamp in and about his business of mining, and also, with a key then in his possession, unlock the safety lamp and light the same; and that the said lamp was kept open for some length of time and used as a common lamp, thereby endangering the lives, safety and health of persons working in said mine and endangering the security of the mines and machinery.

That said defendant also did intentionally and carelessly injure the safety lamp and disobey the orders of the mine boss by using said safety lamp open and by lighting the same at a place in said mine where the use of open lights or lighting safety lamps was prohibited by the mine boss and by the law. And further, that the said Frank Canepeli had in his possession on said date and prior thereto a key or instrument for the purpose of unlocking safety lamps in said mine, where locked safety lamps were used. He at the same time not being a person duly authorized by the mine foreman to have in his possession such a key or instrument for the purpose aforesaid, which key he unlawfully and wrongfully took and appropriated to his own use from the office of the fire boss at said mines, contrary to the acts of the General Assembly in such cases made and provided.

The defendant was arrested and brought before the justice on the 11th of February, 1902, and in default of bail was committed for a hearing on the 14th of February, 1902, from two to three o'clock P. M., on which date the hearing was had. It was proven by the witnesses for the Commonwealth that the defendant was a miner in said mines; that the place where he worked was on an entry where a fall

of slate had occurred and was worked exclusively by locked safety lamps. The defendant's lamp went out and instead of going out to the proper place, as prescribed by the orders of the mine boss, he borrowed another lamp from a fellow workman and went down the entry to and passed where two other men were removing the fall of slate. At the time he passed them his lamp was out. He went down a short distance and came back directly with the lamp lighted.

One of the witnesses testified that he did not have time to go to the station in the mine where lamps were lighted. Witnesses also showed that he had in his possession a key to open locked safety lamps and that he had no authority or right to have it in his possession.

The defendant went on the stand and denied that he lit the lamp in the entry, but admitted having a key.

After the hearing the defendant was bound over to court and in default of three hundred dollars bail, was committed to the county jail.

March 5th, 1902, the defendant waives the finding of the bill in indictment and entered a plea of guilty to the charges set forth in the information, which plea was received by the court and on the same day the defendant was sentenced to pay a fine of one dollar, pay the costs of prosecution and be confined in the jail of said county for a period of thirty days, and stand committed until the sentence was complied with.

Description of Mines and Mine Improvement.

Mines on and Near the Pittsburgh Division of the Pennsylvania Railroad.

Spring Hill.—The general condition, ventilation and drainage were fairly good.

Larimer.—Was in good condition. On my last visit I measured 200,100 cubic feet of air per minute passing in at the inlet, which was well distributed throughout the workings.

Osborne.—Is a new drift opening in the Pittsburgh seam, which when visited was in good condition as to ventilation and drainage.

Penn Gas Coal Run.—Ventilation and drainage were in fair condition.

Penn Gas No. 1.—Was in favorable condition as to ventilation and drainage.

Westmoreland Shaft.—Was in good condition as to ventilation and drainage. The ventilating fan at this mine has been rebuilt, and at my last visit I measured 200,100 cubic feet of air per minute passing out at the outlet, which was well distributed throughout the workings.

Penn Gas No. 5.—This mine was in good condition, with plenty of air in circulation.

Greensburg No. 3.—Was in good condition upon my last visit, as to ventilation and drainage. A ventilating fan of the Murphy type, six feet in diameter, has been installed, which provides ample ventilation, as the underground workings are small.

Hempfield.—The condition of this mine has been favorable, except that the ventilating current at the face of a part of the workings was rather weak. The management has informed me that they have under consideration the erection of a larger ventilating fan, which, when put in operation, will remedy all defects in the ventilation for some time to come.

Hempfield No. 2.—Is a drift opening in the Pittsburgh seam, which is just being opened.

Monastery.—The condition of this mine was satisfactory upon each visit.

Latrobe.—The ventilation, drainage and general condition of this mine have been good upon each visit.

Saxman was in fairly good condition upon each visit.

Loyalhanna Nos. 1 and 2 have been in fairly good condition, except that the ventilation at face of workings is somewhat defective. The attention of the management has been called to this, and they have expressed a willingness to improve it.

Pandora.—General condition was fairly good.

Derry Shaft was in reasonably good condition upon each visit, except that the ventilation at face of workings was rather weak. A new air shaft has been sunk and a more powerful ventilating fan of the Capell type is being installed, which, when completed, will improve the ventilation.

Atlantic No. 1.—Worked out and abandoned.

Atlantic No. 2.—Was in good condition as to ventilation and drainage.

Atlantic No. 3.—Is a new shaft just being opened to the Pittsburgh seam.

Saint Clair.—Was in favorable condition, except that the ventilation was rather weak at the face of a part of the workings. This, however will be improved.

Superior No. 1.—Was in good condition both as to ventilation and drainage. The electric system of haulage is being installed.

Superior No. 2.—Is a new drift opening into the Pittsburgh seam, and is just being opened up.

Gilson.—Is a slope opening to the Pittsburgh seam and is just being opened up.

Ligonier No. 2.—Is a new shaft opening into the Pittsburgh seam

and was in good condition when visited. The former opening, which was a drift, has been abandoned.

Millwood.—General condition has been fairly good during the year.

Lockport.—Was in favorable condition upon each visit.

Seward.—Is a new drift opening into Bed B or the Miller seam, and is just being opened.

Mines on or Near the Turtle Creek Branch of the Pennsylvania Railroad.

Export.—Was in good condition at each visit.

Elizabeth.—Was in fairly good condition at each visit. A new ventilating furnace has been erected which has greatly improved the ventilation.

Lyons Run.—General condition has been good during the year. The tail rope system of haulage is being installed. A new slope opening is now being made which, when completed, will develop the coal lying to the dip of the present workings.

Penn Gas No. 2.—Is located on the Youghiogheny Branch of the Pennsylvania Railroad, and was in fairly good condition upon each visit. A new air shaft has been sunk near the ventilating fan which will cause the fan to give better results, thereby improving the ventilation.

Mines on or Near the Manor Branch of the Pennsylvania Railroad.

Claridge.—Was in good condition upon each visit during the year.

Denmark.—Was in favorable condition upon each visit, except that the ventilating current at the face of a part of the workings was rather weak. The air current will soon be improved, as a more powerful ventilating fan of the Capell type is now being installed, the diameter of which is seventeen feet, width seven feet. It will be driven by a 20"x18" Chambersburg high speed engine. Also one pair of haulage engines 18"x24", link motion and reversible, geared 4 to 1, and connected to six foot grooved drums, are in course of construction. The improvements already completed are two return tubular boilers, 72"x18", adding to the boiler power three hundred horse power. There has also been added a one thousand horse power Stillwell feed water heater, which is being connected to the boilers by a special Yough boiler feed pump, 10"x6"x18". The inside improvements consist of one 20"x30"x36" outside packed plunger Yough pump. When all these improvements are completed they will add greatly to the safety and economy of operation, and value of the mine.

Penn Manor.—The general condition of this mine was fairly good.

Electric mining machines of the Morgan-Gardner type have been installed during the year.

Greensburg No. 1.—Located on South West Branch of the Pennsylvania Railroad, near Huff Station. The ventilation was good; drainage fair.

Mines on and Near the Hempfield Branch of the South West Pennsylvania Railroad.

Seaboard.—Was operated by the Seaboard Coal Company until September 12, when it passed into the hands of the Keystone Coal and Coke Company, which is now operating it. The main object is to connect this shaft with the Carbon and Greensburg No. 2 mines, after which it will be used principally as a pumping station, with the exception of the coal that will be hoisted to supply the local trade.

Greensburg No. 2.—Was in fairly good condition upon each visit.

Carbon.—When last visited was in good condition as to ventilation and drainage. The ventilation has been improved by the installation of a new ventilating fan of the Capell type; diameter thirteen and one-half feet; width six feet.

Arona.—Was in fairly good condition upon each visit during the year.

Sewickley.—Was in good condition upon each visit.

Madison.—Was in good condition upon each visit. The ventilation has been improved by the installation of a ventilating fan.; diameter eighteen feet, width six feet. The ventilation was formerly produced by a furnace.

Keystone.—Is a new shaft just being opened into the Pittsburg Seam.

Baltimore No. 1.—Was in good condition upon each visit.

Baltimore No. 2.—Is a new shaft just being opened into the Pittsburg seam.

Ocean Nos. 1 and 2.—Was in good condition upon each visit.

Mines on and Near the Alexandria Branch of the Pennsylvania Railroad.

Jamison Nos. 1 and 2.—Were in fairly good condition upon each visit, except that the ventilating current at the face of a part of the workings was rather weak. The roads in some places were wet and muddy.

Jamison No. 3.—Was in fairly good condition upon each visit, except the ventilation, which has been improved by the installation of a more powerful ventilating fan of the Capell type. Diameter thirteen feet, width six feet.

Jamison No. 4.—Was in fairly good condition upon each visit. A ventilating fan of the Capell type has been installed at this mine; diameter thirteen feet, width six feet. The Ingersoll and Sullivan mining machines are in use in this mine. The power used for operating the machines is compressed air.

Donohoe.—Was in fairly good condition upon each visit.

Salem.—Was in fairly good condition.

Alexandria.—Was in fairly good condition upon each visit.

Huron.—Was in fairly good condition upon each visit. A ventilating fan of the Brazil type was erected during the year. This has improved the ventilation.

Mines on and Near the Unity Branch of the Pennsylvania Railroad.

Dorothy.—Was in fairly good condition throughout.

Puritan.—Was in good condition upon each visit.

Hostetter and Whitney.—Were in good condition as to ventilation and drainage.

Mines on and Near the Ligonier Valley Railroad.

S. H. Smith.—Worked out and abandoned.

Peters.—Is a new drift opening into the Upper Freeport seam, which was in favorable condition when visited. The product of this mine is used principally for steam purposes at the Peters Paper Company Mills, which are located about one mile from the mine; the coal is conveyed from the mine to the mill over a tram road by a small steam locomotive.

Mines on and Near the Indiana Branch of the Western Pennsylvania Division of the Pennsylvania Railroad.

Isabella.—Was in fairly good condition. The ventilation has been improved by a new air shaft which was sunk near face of workings.

Burrell No. 1.—Worked out and abandoned.

Burrell No. 2.—Was in favorable condition upon each visit.

Graff.—The condition of this mine was favorable.

Maher No. 3.—The condition of this mine has been fairly good.

Smith.—Was in favorable condition upon each visit.

Dixon.—Was in fairly good condition upon each visit. A ventilating furnace, with a grate area of 48 square feet, was erected during the year. This has greatly improved the ventilation.

Blacklick.—Was in fairly good condition as to ventilation and drainage.

Mitchell.—The condition of this mine was reasonably good at each visit. This mine was purchased at the beginning of the year by Mr. Joseph Wharton, who is now operating it and has many improvements under way, with a view of increasing the output. A new opening into the coal, which lies to the dip of the present workings, is now being made. The number of coke ovens has been increased from 24 to 140, with more in course of erection. Machinery of the latest improved type, is being installed at all points necessary for the successful operation of the plant. A new town of about 100 houses is about completed. The indications at present are that this plant will be one of the largest in Indiana county.

Graceton Nos. 1 and 2.—Were in fairly good condition upon each visit.

Tearing Run.—Was in favorable condition. The ventilation has been improved by the erection of a ventilating furnace.

Mines on and near the Bolivar Branch of the Pennsylvania Railroad.

Ray.—The general condition of this mine was favorable during the year. The ventilation has been improved by the erection of a new furnace.

Graff No. 2.—Was in favorable condition when visited.

Indiana.—Was in reasonably good condition when visited.

Lincoln.—Was in favorable condition upon each visit.

Cramer.—This mine was in good condition upon my last visit. A new ventilating fan of the Brazil type had been installed, which greatly improves the ventilation.

Mines on and near the Western Pennsylvania Division of the Pennsylvania Railroad.

Mitchell-Watson No. 1.—The condition of this mine was favorable.

Bowman.—Was in fairly good condition.

Edri.—The condition of this mine was good.

Examination of Applicants for Certificates of Competency as Mine Foremen.

The annual examination of applicants for certificates of competency as mine foremen was held in Fisher's Hall, Greensburg, Pa., January 21, 22 and 23, 1902.

The Board of Examiners was composed of C. B. Ross, Inspector; R. O. Thomas, Superintendent and William Severn, Mine Foreman.

Twenty-six applicants appeared and were examined and the follow-

ing nine, having passed a satisfactory examination, received certificates:

First Grade.

David Fulton, Darragh.

M. I. Patterson, Bolivar.

Samuel Horrell, Calumet.

W. W. Laughlin, Luxor.

Alex. Baird, Greensburg.

G. Brooks Ross, Greensburg.

Charles M. O'Connell, Irwin.

John McElhaney, Irwin.

Ephraim Beardsley, Larimer.

TABLE I—Showing names of operators, railroads, etc., and location of collieries in the Second Bituminous District for the year 1902.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Keystone Coal & Coke Co.						
Greensburg No. 1.	Westmoreland.	A. D. Harmon.	Greensburg.	Henry Welty.	Greensburg.	S. W. P. R. R.
Greensburg No. 2.	Westmoreland.	A. D. Harmon.	Greensburg.	H. H. Null, Jr.	Greensburg.	Pennsylvania Railroad.
Greensburg No. 3.	Westmoreland.	A. D. Harmon.	Greensburg.	Howard Patton.	Greensburg.	Pennsylvania Railroad.
Claridge.	Westmoreland.	A. D. Harmon.	Greensburg.	J. D. Wentling.	Greensburg.	S. W. P. R. R.
Anonia.	Westmoreland.	H. F. Bovard.	Darragh.	H. F. Bovard.	Darragh.	Pennsylvania Railroad.
Sevickley.	Westmoreland.	H. F. Bovard.	Darragh.	H. F. Bovard.	Darragh.	Pennsylvania Railroad.
McLinton.	Westmoreland.	H. F. Bovard.	Darragh.	H. F. Bovard.	Darragh.	Pennsylvania Railroad.
Salem.	Westmoreland.	A. D. Harmon.	Greensburg.	Alex Coulter.	Greensburg.	Pennsylvania Railroad.
Hempfield.	Westmoreland.	A. D. Harmon.	Greensburg.	A. O. Jones.	Greensburg.	Pennsylvania Railroad.
Hempfield No. 2.	Westmoreland.	A. D. Harmon.	Greensburg.	A. O. Jones.	Greensburg.	S. W. P. R. R.
Seahard.	Westmoreland.	A. D. Harmon.	Greensburg.	J. D. Wentling.	Greensburg.	S. W. P. R. R.
Seward.	Westmoreland.	H. F. Bovard.	Darragh.	James Keenan.	Seward.	S. W. P. R. R.
Keystone.	Westmoreland.	H. F. Bovard.	Darragh.	James Keenan.	Seward.	S. W. P. R. R.
Westmoreland Coal Co.						
Export.	Westmoreland.	R. J. Jones.	Irwin.	T. D. Parfitt.	Export.	Pennsylvania Railroad.
Larimer.	Westmoreland.	R. J. Jones.	Irwin.	Leonard Colerick.	Irwin.	Pennsylvania Railroad.
Osborne.	Westmoreland.	R. J. Jones.	Irwin.	Leonard Colerick.	Irwin.	Pennsylvania Railroad.
Westmoreland shaft.	Westmoreland.	R. J. Jones.	Irwin.	J. W. Fisher.	Irwin.	Pennsylvania Railroad.
Penn Gas Coal Co.						
Coal Run Gas.	Westmoreland.	F. Frank Wolf.	Irwin.	William Rogers.	Irwin.	Pennsylvania Railroad.
No. 1 Penn Gas.	Westmoreland.	F. Frank Wolf.	Irwin.	Samuel Wilson.	Irwin.	Pennsylvania Railroad.
No. 2 Penn Gas.	Westmoreland.	F. Frank Wolf.	Irwin.	Amos Stitley.	Irwin.	Pennsylvania Railroad.
No. 5 Penn Gas.	Westmoreland.	F. Frank Wolf.	Irwin.	John Heintzelman.	Penn Station.	Pennsylvania Railroad.
Jamison Coal & Coke Co.						
Jamison No. 1.	Westmoreland.	W. W. Jamison.	Greensburg.	R. H. Jamison.	Greensburg.	Pennsylvania Railroad.
Jamison No. 2.	Westmoreland.	W. W. Jamison.	Greensburg.	R. H. Jamison.	Greensburg.	Pennsylvania Railroad.
Jamison No. 3.	Westmoreland.	W. W. Jamison.	Greensburg.	Thos. S. Jamison.	Greensburg.	Pennsylvania Railroad.
Jamison No. 1.	Westmoreland.	W. W. Jamison.	Greensburg.	J. C. Jamison.	Greensburg.	Pennsylvania Railroad.
Loyahanna Coal & Coke Co.						
Loyahanna Nos. 1 and 2.	Westmoreland.	C. C. Watt.	Philadelphia.	William Leckie.	Loyahanna.	Pennsylvania Railroad.
Pandora.	Westmoreland.	C. C. Watt.	Philadelphia.	William Leckie.	Loyahanna.	Pennsylvania Railroad.

Hostetter-Connellsville Coke Co.	Westmoreland..	J. R. Marshall..	Whitney,	J. R. Marshall..	Whitney,	Pennsylvania Railroad.
Hostetter,	Westmoreland..	J. R. Marshall..	Whitney,	J. R. Marshall..	Whitney,	Pennsylvania Railroad.
American Coke Co.	Westmoreland..	O. W. Kennedy..	Scottdale,	Jas. Dumphy,	Baggaley,	Pennsylvania Railroad.
Puritan or Baggaley,	Westmoreland..	O. W. Kennedy..	Scottdale,	A. F. Downing,	Latrobe,	Pennsylvania Railroad.
Dorothy,	Westmoreland..	.....	.....	.....	.....	Pennsylvania Railroad.
Atlantic Crushed Coke Co.	Westmoreland..	.....	.....	H. C. Burkett,	Greensburg,	Pennsylvania Railroad.
Atlantic No. 1,	Westmoreland..	.....	.....	H. C. Burkett,	Greensburg,	Pennsylvania Railroad.
Atlantic No. 2,	Westmoreland..	.....	.....	H. C. Burkett,	Greensburg,	Pennsylvania Railroad.
Atlantic No. 3,	Westmoreland..	.....	.....	.....	.....	Pennsylvania Railroad.
Ligonier Coal Co.	Westmoreland..	Murray Forbes,	Greensburg,	Daniel Craig,	Derry Station,	Ligonier Valley R. R.
S. H. Smith,	Westmoreland..	.....	.....	Daniel Craig,	Derry Station,	Ligonier Valley R. R.
Ligonier No. 2,	Westmoreland..	.....	.....	.....	.....	Pennsylvania Railroad.
Burrell Coal Co.	Indiana, .....	.....	.....	Thos. Maher,	Blairsville,	Pennsylvania Railroad.
Burrell No. 1,	Indiana, .....	.....	.....	.....	.....	Pennsylvania Railroad.
Burrell No. 2,	Indiana, .....	.....	.....	.....	.....	Pennsylvania Railroad.
McCreary Coke Co.	Indiana, .....	.....	.....	Everhart Bierer,	Graceton,	Pennsylvania Railroad.
Graceton No. 1,	Indiana, .....	.....	.....	.....	.....	Pennsylvania Railroad.
Graceton No. 2,	Indiana, .....	.....	.....	.....	.....	Pennsylvania Railroad.
Blairsville Coke Co.	Indiana, .....	.....	.....	.....	.....	Pennsylvania Railroad.
Graff,	Indiana, .....	.....	.....	.....	.....	Pennsylvania Railroad.
Graff No. 2,	Indiana, .....	.....	.....	.....	.....	Pennsylvania Railroad.
Superior Coal and Coke Co.	Westmoreland..	M. W. Saxman,	Latrobe,	Wilber P. Graff,	Blairsville,	Pennsylvania Railroad.
Superior No. 1,	Westmoreland..	M. W. Saxman,	Latrobe,	Wilber P. Graff,	Blairsville,	Pennsylvania Railroad.
Superior No. 2,	Westmoreland..	.....	.....	E. M. Saxman,	Latrobe,	Pennsylvania Railroad.
Pittsburg and Baltimore Coal Co.	Westmoreland..	E. M. Steek,	Park Bldg., Pittsburg,	W. L. Coulston,	Adamsburg,	S. W. P. R. R.
Baltimore No. 1,	Westmoreland..	E. M. Steek,	Park Bldg., Pittsburg,	W. L. Coulston,	Adamsburg,	S. W. P. R. R.
Baltimore No. 2,	Westmoreland..	.....	.....	.....	.....	S. W. P. R. R.
Ocean Coal Co.	Westmoreland..	Thos. Fisher,	36 Betz Bldg., Phila.,	F. I. Kimball,	Hermintie,	S. W. P. R. R.
Ocean Nos. 1 and 2,	Westmoreland..	.....	.....	.....	.....	Pennsylvania Railroad.
Maher Coal and Coke Co.	Westmoreland..	.....	.....	Thomas Maher,	Blairsville,	Pennsylvania Railroad.
Maher No. 3,	Westmoreland..	.....	.....	.....	.....	Pennsylvania Railroad.
Manor Gas Coal Co.	Westmoreland..	A. P. Cameron,	Claridge,	A. P. Cameron,	Claridge,	Pennsylvania Railroad.
Denmark,	Westmoreland..	.....	.....	.....	.....	Pennsylvania Railroad.
Spring Hill Gas Coal Co.	Allegheny, .....	.....	.....	W. W. Dempster,	Pittsburg,	Pennsylvania Railroad.
Spring Hill,	Allegheny, .....	.....	.....	.....	.....	Pennsylvania Railroad.
W. B. Skelly Coal Co.	Westmoreland..	.....	.....	W. B. Skelly,	Export,	Pennsylvania Railroad.
Elizabeth,	Westmoreland..	.....	.....	.....	.....	Pennsylvania Railroad.

TABLE 1—Continued.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Penn Manor Shaft Co. Penn Manor,	Westmoreland.	H. A. Kuhn,	646 Frick Bldg., Pgh.,	J. G. Ferguson,	Harrison City, ...	Pennsylvania Railroad.
Alexandria Coal Co. Alexandria,	Westmoreland.	.....	.....	D. D. Munro,	Greensburg,	Pennsylvania Railroad.
Dorohoe Coal and Coke Co. Donohoe,	Westmoreland.	John P. Donohoe, ..	Greensburg,	C. Rae King,	Goff,	Pennsylvania Railroad.
Huron Coal Co. Huron,	Westmoreland.	.....	.....	Howard Patton,	Greensburg,	Pennsylvania Railroad.
Latrobe Coal Co. Latrobe,	Westmoreland.	John Loyd,	Arcade Bldg., Phila., ..	D. W. Jones,	Latrobe,	Pennsylvania Railroad.
H. C. Frick Coke Co. Monastery,	Westmoreland.	O. W. Kennedy, ...	Scottdale,	A. F. Downing,	Latrobe,	Pennsylvania Railroad.
Saxman Coal and Coke Co. M. Saxman,	Westmoreland.	M. W. Saxman, ...	Latrobe,	E. M. Saxman,	Latrobe,	Pennsylvania Railroad.
Derry Coal and Coke Co. Derry,	Westmoreland.	E. F. Saxman,	Latrobe, .....	.....	.....	Pennsylvania Railroad.
Bossemer Coke Co. Saint Clair,	Westmoreland.	R. L. Martin,	712 Lewis Bld., Pgh., ..	R. L. Martin, Jr., ..	Bradenville,	Pennsylvania Railroad.
Millwood Coal and Coke Co. Millwood,	Westmoreland.	E. B. Kimmell, ...	Millwood,	E. B. Kimmell,	Millwood,	Pennsylvania Railroad.
Reese-Hammond Fire Brick Co. Indiana,	Indiana.	.....	.....	Robert Binnie,	Bollivar,	Pennsylvania Railroad.
Bollivar Coal and Coke Co. Lockport,	Westmoreland.	Geo. H. Anderson, ..	Chamber Commerce, Pittsburg.	Jno. McHail,	Bollivar,	Pennsylvania Railroad.
Harris Coal and Coke Co. Lindeln,	Indiana.	Jas. Kerr,	11 Broadway, N. Y., ...	L. Blenkinsopp,	Lockport,	Pennsylvania Railroad.
Elktns Gas Coal Co. Lyons Run,	Westmoreland.	.....	.....	J. H. Powell,	Haser,	Pennsylvania Railroad.

American Steel Hoop Co. Isabella,	Westmoreland, ..	O. W. Kennedy, ...	Scottdale,	J. M. Gallagher,	Blairsville,	Pennsylvania Railroad.
Ray Coal Co. Ray,	Indiana, .....	.....	.....	Thos. Maher,	Blairsville,	Pennsylvania Railroad.
Robert Smith. Smith,	Indiana,	Roy Gerard,	Blairsville,	R. Gerard,	Blairsville,	Pennsylvania Railroad.
Blacklick. Blacklick,	Indiana, .....	.....	.....	F. N. Graff,	Blairsville,	Pennsylvania Railroad.
Dixon Brothers. Dixon,	Indiana, .....	.....	.....	G. W. Dixon,	Blairsville,	Pennsylvania Railroad.
Glenmore Coal & Coke Co. Tearing Run,	Indiana,	J. M. Guthrie,	Indiana,	Joe J. Campbell,	Homer City,	Pennsylvania Railroad.
Joseph Wharton. Mitchell,	Indiana,	Harry McCreary, ...	Coral, .....	.....	.....	Pennsylvania Railroad.
Mitchell-Watson Coal & Coke Co. Mitchell-Watson No. 1,	Indiana, .....	.....	.....	G. P. McCartney, ..	Indiana,	Pennsylvania Railroad.
Bowman Coal Mining Co. Bowman,	Indiana, .....	.....	.....	S. J. Robinson,	Saltsburg,	Pennsylvania Railroad.
Edri Coal Co. Edri,	Indiana,	L. W. Hicks,	Leechburg, .....	.....	.....	Pennsylvania Railroad.
Johnstown Coal Co. Cramer,	Indiana, .....	.....	.....	H. C. Burkett,	Greensburg,	Pennsylvania Railroad.
Latrobe, Connellsville Coal and Coke Co. Gibson,	Westmoreland, ..	M. W. Saxman,	Latrobe,	W. R. Siard,	Latrobe,	Pennsylvania Railroad.
Peters Paper Co. Peters,	Westmoreland, ..	James Peters,	Latrobe,	James F. Peters,	Latrobe,	Ligonier Valley R. R.

TABLE II.—Gives the total number of tons of coal mined and tons of coke produced in each colliery, number of days worked, number of employees, number of employees killed and injured, number of kegs of powder, etc., used in the Second Bituminous District for the year ending December 31, 1902.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Total production of coke in tons.	Number of coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Keystone Coal and Coke Co.														
Greensburg No. 1,	Westmoreland.	155,297	2,263	1,098	160,332	1,082	10	* 286.25	141	2	..	..	..	19
Greensburg No. 2,	Westmoreland.	250,521	2,388	1,065	254,304	..	..	270.6	223	..	..	6	..	25
Greensburg No. 3,	Westmoreland.	32,123	40	..	32,163	..	..	253	30	1	..	..	100	25
Claridge,	Westmoreland.	202,298	2,026	599	204,923	..	..	253	315	1	..	500	800	4
Carbon,	Westmoreland.	131,708	3,575	9,427	287,517	27,602	57	295	263	2	..	200	225	14
Carroll,	Westmoreland.	272,022	1,680	657	274,259	..	..	279.6	317	..	..	..	..	26
Seabrook,	Westmoreland.	250,060	4,551	332	254,943	..	..	281	277	1	..	13	700	24
Madison,	Westmoreland.	226,368	384	46	226,798	..	..	285	265	1	..	..	..	22
Salem,	Westmoreland.	150,342	2,747	924	205,796	29,256	50	271	272	..	..	312	780	36
Hempfield,	Westmoreland.	236,755	4,300	8,051	249,176	..	..	312	203	1	..	600	600	30
Seaboard,	Westmoreland.	1,235	235	9	1,384	..	..	37	9	..	..	..	..	1
Seaward,	Westmoreland.	2,002	20	2,855	3,600	..	..	68	13	..	..	..	..	1
Keystone,	Westmoreland.	..	..	..	2,022	..	..	67	24	..	..	50	50	4
Totals,		1,999,121	24,169	25,093	2,156,657	57,910	117	230.2	2,354	6	10	1,686	3,155	235
Westmoreland Coal Co.														
Export,	Westmoreland.	645,697	4,798	1,526	652,021	..	..	307	630	1	..	..	..	49
Larimer,	Westmoreland.	510,990	5,667	1,576	518,233	..	..	307	427	..	3	..	..	34
Isborne,	Westmoreland.	..	..	..	..	..	..	181	179	..	..	..	..	6
Westmoreland shaft,	Westmoreland.	362,493	13,912	2,089	398,494	..	..	290	469	1	1	..	..	40
Totals,		1,599,180	24,377	5,191	1,568,748	..	..	273.75	1,705	2	4	..	..	129
Penn Gas Coal Co.														
Coal Run,	Westmoreland.	93,396	..	116	93,512	..	..	246	114	..	..	..	..	7
No. 1 Penn Gas,	Westmoreland.	121,656	7,362	706	132,724	..	..	245	174	..	1	..	..	10

[illegible]

*Totals in this column are averages.

§In course of construction.

†Abandoned during the year.

TABLE II—Continued.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Total production of coke in tons.	Number of coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
McCreary Coke Co.	Indiana.	240	1,560	768	40,481	21,403	49	302	102	1	1	.....	.....	.....
Graeton No. 1.	Indiana.	.....	4,685	92	111,293	62,210	150	306	286	1	1	.....	.....	.....
Graeton No. 2.	Indiana.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals.		240	6,545	860	151,444	83,613	199	304	388	2	1	.....	.....	.....
Blairsville Coke Co.	Indiana.	30,580	.....	.....	30,580	.....	.....	250	36	.....	.....	240	.....	5
Graft.	Indiana.	2,560	.....	20	2,520	.....	.....	95	15	.....	.....	.....	.....	3
Graft No. 2.	Indiana.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals.		32,680	.....	20	33,100	.....	.....	172.5	51	.....	.....	240	.....	7
Superior Coal and Coke Co.	Westmoreland.	114,171	799	393	175,905	44,241	71	303	195	1	1	.....	.....	18
Graft No. 1.	Westmoreland.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Superior No. 2.	Westmoreland.	114,171	799	393	175,905	44,241	71	303	195	1	1	.....	.....	18
Superior No. 2.	Westmoreland.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals.		237,365	2,500	1,290	241,005	.....	.....	293	200	2	3	.....	350	20
Pittsburg and Baltimore Coal Co.	Westmoreland.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Baltimore No. 1.	Westmoreland.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Baltimore No. 2.	Westmoreland.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals.		237,365	2,500	1,290	241,005	.....	.....	293	200	2	3	.....	350	20

Production, etc., of single collieries will be found in the Recapitulation.

Totals in this column are averages.

In course of construction.

TABLE III.—Showing the number of employees at each class of employees in the Second Bituminous District during the year 1902.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.										Grand total, inside and outside.	
		Mine foremen.	Assistant mine foremen.	Pit bosses.	Miners.	Machine runners.	Machine loaders.	Machine scrapers.	Drivers and runners.	Door-boys and helpers.	Company men.	All other employees.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	Coke employees.	Book-keepers and clerks.	All other employees.	Total outside.		
Keystone Coal & Coke Co.																							
Greensburg No. 1.	Westmoreland.	1	1	1	97				14	1	7	1	121	1			2	4	2	1	10	19	140
Greensburg No. 2.	Westmoreland.	1	1	1	178				12		8		20				4	5		1	12	33	230
Greensburg No. 3.	Westmoreland.	1	1	1	235				13	4	7	1	28	1	1						62	30	300
Charlton.	Westmoreland.	1	1	1	245				19				252	1	1		1	3	1	1	23	23	315
Apoca.	Westmoreland.	1	1	1	180				10	6		10	211	1	1		4	22			19	22	363
Swartlesley.	Westmoreland.	1	2	2	244				16			15	263	1	1		1				22	34	317
Mohrison.	Westmoreland.	1	1	1	196				17	3		12	208	1	1		1				30	31	279
Sadon.	Westmoreland.	1	1	1	299				16	10		19	337	1	1		2				23	72	367
Hempfield.	Westmoreland.	1	1	1	149				19	3	7		171	1			5	30	1		23	32	293
Hempfield No. 2.	Westmoreland.	1	1	1	6				1		1		9				3			1	4	15	4
Shabard.	Westmoreland.	1	1	1	10				2		1		11		1	2							
Seward.	Westmoreland.	1	1	1	16								20										
Keystone.*	Westmoreland.	1	1	1																			
Totals.		12	4	3	1,565	10	100	10	162	27	31	80	2,060	11	8	37	36	54	10	193	349	2,453	
Westmoreland Coal Co.																							
Export.	Westmoreland.	1	1	1	151	15	280	15	54	25	28		573		1	5	5		4	42	57	631	
Larimer.	Westmoreland.	1	1	1	125	10	183	10	36	1	19		308		1	4	1		2	48	59	427	
Westmoreland.	Westmoreland.	1	1	1	125	15	241	14	43	3	9		308		1	6	13		3	37	49	357	
Westmoreland shaft.	Westmoreland.	1	1	3	77	15	241	14	43	10	22		410		1	6	13		2	37	59	461	
Totals.		4	3	8	468	40	693	39	139	56	69		1,511		3	15	23		8	137	186	1,705	
Penn Gas Coal Co.																							
Coal Run.	Westmoreland.	1	1	1	81				6		5		94			1	2		1	16	26	114	
No. 1 Penn Gas.	Westmoreland.	1	1	2	125				11	3	11		153			1	3		1	12	21	174	

No. 2 Penn Gas.	1	1	5	99	14	112	14	28	7	30	310	1	6	9	1	25	42	332
No. 5 Penn Gas.	1	1	1	49	14	112	14	24	10	13	238	1	4	3	1	49	58	296
Totals.	4	4	9	354	28	224	28	69	20	59	746	4	15	16	4	102	141	936
Jarison Coal & Coke Co.																		
Jarison No. 1.	2	2	1	240				33	5	29	310	1	2	9	105	2	126	436
Jarison No. 2.	1	2	229	10	127	10	25	3	18	9	425	1	2	6	7	125	2	49
Jarison No. 3.	1	1	1	29	3	29	3			7	6	79	1	1	3	4	16	36
Jarison No. 4.	4	4	4	489	13	156	13	58	8	54	314	3	5	16	20	230	5	334
Totals.																		1,148
Loyalhanna Coal & Coke Co.																		
Loyalhanna Nos. 1 and 2.	1	1	2	231				25	5	24	299	1	2	5	3	50	4	92
Pandora.	1	1	1	122	4		4	10	3	20	167	1	3	3	8	27	15	331
Totals.	2	2	3	353	4		4	35	8	44	466	1	3	8	11	50	5	573
Hostetter-Connelville Coke Co.																		
Hostetter.	1	1	2	217				18	4	10	4	236	1	1	5	6	92	1
Whitney.	1	1	2	214				18	2	10	3	250	1	1	5	6	90	2
Totals.	2	2	4	431				36	6	20	7	506	2	2	10	12	182	3
American Coke Co.																		
Puritan or Baggett.	1	1	2	182				22	4	22	234	1	2	5	4	139	2	4
Dorothy.	1	1	2	130				12	3	7	110	1	1	4	6	70	1	187
Totals.	2	2	4	312				34	7	29	15	404	2	3	9	10	239	3
Atlantic Crushed Coke Co.																		696
Atlantic No. 1.	1	1	18					2		1	22							22
Atlantic No. 2.	1	1	96					8	5	6	117	1	1	2	4	33	1	164
Atlantic No. 3.*	2	2	1	114				10	5	7	139	1	1	2	4	33	1	186
Totals.																		
Ligonier Coal Co.																		
S. H. Smith.	1	1	29					2		1	25	1	1				1	38
Ligonier No. 2.	1	1	40					4		3	6	54	1	4	3	2	4	67
Totals.	2	2	69					6		4	6	79	1	4	3	2	4	103
Burrell Coal Co.																		
Burrell No. 1.	1	1	12					2			15	1	1			1	3	19
Burrell No. 2.	1	1	38					3			52	1	1			2	4	46
Totals.	2	2	50					5			57	2	2			3	7	65

*In course of construction.

†Abandoned during the year.

TABLE III—Continued.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.							Grand total, inside and outside.		
		Total Inside.										Total outside.									
		Mine foremen.	Assistant mine foremen.	Fire bosses.	Miners.	Machine runners.	Machine loaders.	Machine scrapers.	Drivers and runners.	Door-boys and helpers.	Company men.	All other employees.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	Coke employees.	Book-keepers and clerks.		All other employees.	
McCreary Coke Co. Graceton No. 1. Graceton No. 2.	Indiana.	1	1	.....	56	2	2	2	8	2	2	.....	75	1	1	2	18	1	3	27	102
	Indiana.	1	1	.....	52	36	36	36	40	8	8	.....	218	...	3	8	50	1	.....	68	286
	Totals.	2	1	.....	108	38	38	38	48	10	10	.....	283	1	4	10	68	2	3	96	388
Blairsville Coke Co. Graft. Graft No. 2.	Indiana.	1	.....	.....	28	.....	.....	.....	4	.....	.....	3	36	.....	.....	.....	.....	.....	.....	.....	36
	Indiana.	1	.....	.....	12	.....	.....	.....	1	.....	.....	.....	14	1	.....	.....	.....	.....	.....	1	15
	Totals.	2	.....	.....	40	.....	.....	.....	5	.....	.....	.....	50	1	.....	.....	.....	.....	.....	1	51
Superior Coal and Coke Co. Superior No. 1. Superior No. 2.*	Westmoreland.	1	.....	.....	134	.....	.....	.....	15	4	6	.....	160	1	1	3	22	2	4	35	195
	Westmoreland.	1	.....	.....	134	.....	.....	.....	15	4	6	.....	160	1	1	3	22	2	4	35	195
	Totals.	1	.....	.....	268	.....	.....	.....	30	8	12	.....	320	2	2	6	44	4	8	70	390
Pittsburg & Balt. Coal Co. Baltimore No. 1. Baltimore No. 2.	Westmoreland.	1	.....	.....	50	10	75	10	20	4	5	.....	175	1	1	3	.....	1	15	25	200
	Westmoreland.	1	.....	.....	50	10	75	10	20	4	5	.....	175	1	1	3	.....	1	15	25	200
	Totals.	1	.....	.....	100	20	150	20	40	8	10	.....	350	2	2	6	.....	2	30	50	400

Persons employed, etc., of single collieries will be found in the Recapitulation.

*In course of construction.

REPORT OF THE BUREAU OF MINES.

Off. Doc.

TABLE III—Continued.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.											Occupations of Persons Employed Outside.											Grand total, inside and outside.
		Mine foremen.	Assistant mine foremen.	Fire bosses.	Miners.	Machine runners.	Machine loaders.	Machine scrapers.	Drifters and runners.	Door-boys and helpers.	Company men.	All other employees.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	(Coke employees.	Book-keepers and clerks.	All other employees.	Total outside.			
Latrobe, Connellsville Coal and Coke Co.	Westmoreland.	1	1	1	21	5	1	5	521	5	5	5	40	1	1	2	5	7	1	3	20	60		
Peters Paper Co.	Westmoreland.	1	1	1	14	1	1	1	1	2	2	2	20	1	1	2	1	1	3	4	24			
Totals.		74	21	51	7,482	175	1,444	174	968	227	500	201	11,317	57	74	223	295	1,545	77	1,007	3,139	14,516		

TABLE III—Continued.

Names of Operators and Collieries.	County.	Number of Days Worked in Each Month.												
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Keystone Coal and Coke Co.,	Westmoreland.	19.3	16.5	16	18.3	19.9	19	19.4	18.3	18.5	20	20.6	21.6	230.2
Westmoreland Coal Co.,	Westmoreland.	27	23.6	25	26	22.5	25	24	24.5	26	26.5	24	24.6	273.75
Penn Gas Coal Co.,	Westmoreland.	25.6	19	19.5	20.5	22.2	22.7	22	19.9	22	22.4	18.9	19.5	255.4
Union Coal and Coke Co.,	Westmoreland.	27	21	26	26	27	25	26	26	26	25.6	24	20.5	255.6
Westmoreland Coal Co.,	Westmoreland.	25.25	21.25	21.75	21.5	24.5	24.5	26	24.5	25.25	24.5	23	20.5	280.5
Hartford and Wellsville Coke Co.,	Westmoreland.	27	21.5	22	24	23.5	23	27	23	26	27	27	26	291
American Coke Co.,	Westmoreland.	26.5	21.5	22	24	23.5	23	27	23	26	27	27	26	291
Atlantic Crushed Coke Co.,	Westmoreland.	26	21	21	25	25	24.5	24.5	24.5	22	22	22.5	21.5	221.25
Lucasville Coal Co.,	Westmoreland.	24	21	21	24	24	24.5	24.5	24.5	24.5	24.5	24.5	24.5	232
Burrall Coal Co.,	Indiana.	24	21	21	24	24	24.5	24.5	24.5	24.5	24.5	24.5	24.5	232
McNeary Coke Co.,	Indiana.	27	22.5	23	24	26.5	25.5	25.5	19.5	19	25	24	23	233.5
Blairsville Coke Co.,	Indiana.	27	23	25	26	26.5	24.5	26	25.5	24.5	27	23.5	26	294
Superior Coal and Coke Co.,	Indiana.	24	18	15	23	17	14	23	23	23	23	22.5	22	172.5
Pittsburg and Baltimore Coal Co.,	Westmoreland.	27	24	25	26	26	25	26	26	26	27	24	26	293
Ocean Coal Co.,	Westmoreland.	27	21	26	26	27	26	24	20	23	27	24	26	293
Marion Coal and Coke Co.,	Westmoreland.	27	17.5	18.7	22.1	26.7	24.5	25.5	22.7	20.8	21.1	16.1	19.8	262.3
Marion Gas Coal Co.,	Westmoreland.	27	17.5	18.7	22.1	26.7	24.5	25.5	22.7	20.8	21.1	16.1	19.8	262.3
Spring Hill Gas Coal Co.,	Allegheny.	27	24	26	26	26	25	26	24	26	26	24	25	304
W. E. Skelly Coal Co.,	Westmoreland.	27	24	26	26	26	25	26	24	26	26	24	25	304
Penn Menor Shaft Co.,	Westmoreland.	27	24	26	26	26	25	26	24	26	26	24	25	304
Alexandria Coal Co.,	Westmoreland.	27	24	26	26	26	25	26	24	26	26	24	25	304
Donohoe Coal and Coke Co.,	Westmoreland.	27	24	26	26	26	25	26	24	26	26	24	25	304
Lucasville Coal Co.,	Westmoreland.	27	24	26	26	26	25	26	24	26	26	24	25	304
H. C. Frick Coke Co.,	Westmoreland.	27	24	26	26	26	25	26	24	26	26	24	25	304
Saxman Coal and Coke Co.,	Westmoreland.	27	24	26	26	26	25	26	24	26	26	24	25	304
Berry Coal and Coke Co.,	Westmoreland.	27	24	26	26	26	25	26	24	26	26	24	25	304
Bessemer Coal Co.,	Westmoreland.	27	24	26	26	26	25	26	24	26	26	24	25	304
Millwood Coal and Coke Co.,	Westmoreland.	27	24	26	26	26	25	26	24	26	26	24	25	304
Reese-Hammond Fine Brick Co.,	Indiana.	17	21	24	26	27	25	25	25	24	25	25	24	290
Reese-Hammond Fine Brick Co.,	Indiana.	17	21	24	26	27	25	25	25	24	25	25	24	290
Belvoir Coal and Coke Co.,	Westmoreland.	27	24	26	26	26	25	26	24	26	26	24	25	298
Har Is Coal and Coke Co.,	Indiana.	18	14	21	24	22	24	23	25	25	26	23	24	269

TABLE III—Continued.

Names of Operators and Collieries.	County.	Number of Days Worked in Each Month.												Total.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
Elkins Gas Coal Co.,	Westmoreland.	24	19.75	24.5	23	24.5	15.5	24.75	23.5	20	20.75	17.25	21	238.5
American Steel Hoop Co.,	Westmoreland.	27	24	26	26	27	25	26	26	26	27	25	21	311
Ray Coal Co.,	Indiana.	27	24	20	24	29	29	26	28	22	27	23	25	300
Robert Smith,	Indiana.	25	22	17	24	29	21	21	28	22	28	18	22	264
Graft Coal Co.,	Indiana.	21	20	13	13	22	21	21	22	21	20	23	22	258
Dixon Brothers,	Indiana.	18	18	13	13	22	16	21	22	18	25	20	21	237
Glenmore Coal and Coke Co.,	Indiana.	18	16	20	12	16	13	10	17	16	21	13	12	184
Joseph Wharton,	Indiana.	23	24	24	24	24	24	24	24	24	24	24	24	240
Mitchell Vickers Coal and Coke Co.,	Indiana.	23	20	21	10	.....	.....	10	13	24	25	18	15	181
Edin Coal Mining Co.,	Indiana.	26	23	26	9	.....	.....	6	.....	18	26	22	26	202
Edin Coal Co.,	Indiana.	.....	.....	.....	.....	.....	.....	.....	16	17	21	22	23	99
Johnstown Coal Co.,	Indiana.	24	20	23	26	25	24	22	25	20	23	20	21	273
Latrobe-Connelville Coal and Coke Co.,	Westmoreland.	.....	.....	.....	.....	.....	.....	.....	.....	26	27	25	26	104
Peters Paper Co.,	Westmoreland.	.....	.....	.....	.....	.....	.....	.....	26	26	25	25	26	128
Totals,		22.9	20	21	21	21.9	20.8	21.8	22.6	22.7	24.8	21.8	23.4	256.6

TABLE IV—List of fatal accidents that occurred in and about the mines of the Second Bituminous District for the year ending December 31, 1902.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan. 11	Paul Kruspir,	Slavonic, ..	Miner,	30	S	1	1	Jamison No. 3,	Westmoreland,	Injured by fall of coal; died Jan. 14.
22	Daniel Hamilton, ..	Scottish, ..	Miner, boy, ..	14	S	1	1	Madison,	Westmoreland,	Instantly killed by a fall of coal.
Feb. 1	Norgies Yeronius, ..	Lithuanian,	Machine runner,	28	S	1	1	Export,	Westmoreland,	Caught in mining machine; died February 6.
10	Bartol Ausets,	Austrian, ..	Miner,	35	M	1	5	Denmark,	Westmoreland,	Injured by fall of slate; died Feb. 12.
12	Mike Pesus,	Slavonic, ..	Miner,	34	M	1	1	Jamison No. 3,	Westmoreland,	Instantly killed by a fall of slate.
Mar. 10	Edward McIntyre, ..	American, ..	Miner,	21	S	1	1	Greensburg No. 2, ..	Westmoreland,	Injured by fall of slate; died Feb. 14.
24	Frank Sassi,	Polish,	Miner,	42	M	1	3	Jamison No. 3,	Westmoreland,	Instantly killed by a fall of slate.
April 1	Frank Sassi,	Polish,	Miner,	42	M	1	3	Ocean No. 1,	Westmoreland,	Instantly killed by a fall of slate.
16	Frank Wolff,	Austrian, ..	Miner,	24	S	1	1	Alexandria,	Westmoreland,	Instantly killed by a fall of slate.
8	Henry A. Dunn,	Welsh,	Miner,	46	M	1	2	Penn Gas No. 2, ..	Westmoreland,	Instantly killed by a fall of slate.
May 8	Daniel Kreck,	Polish,	Miner,	40	M	1	2	Denmark,	Westmoreland,	Injured by fall of slate; died June 15.
12	Frank Nowak,	Polish,	Miner,	40	M	1	2	Alexandria,	Westmoreland,	Instantly killed by a fall of slate.
22	Martin Nekovich, ..	Slavonic, ..	Miner,	34	M	1	2	Superior No. 1,	Westmoreland,	Caught between car and roof; died following day.
27	Joe Rushnaek,	Slavonic, ..	Miner,	35	M	1	2	Jamison No. 3,	Westmoreland,	Instantly killed by a fall of slate.
31	Chas. Crupell,	Slavonic, ..	All other employees,	43	M	1	1	Jamison No. 3,	Westmoreland,	Instantly killed by falling from cage in shaft.
June 3	Bartolo Domenegatto	Italian,	Machine loader,	23	M	1	1	Westmoreland shaft,	Westmoreland,	Instantly killed by a fall of slate.
14	Andrew Dietrick, ..	Italian,	Machine loader,	47	M	1	1	Jamison No. 3,	Westmoreland,	Fatally injured by a fall of slate.
16	Nicol Busetti,	Italian,	Miner,	29	S	1	1	Millwood,	Westmoreland,	Crushed by fall of slate; died June 30.
23	Benjamin Guase, ..	Slavonic, ..	Miner, boy, ..	13	S	1	1	Isabella,	Westmoreland,	Crushed by fall of slate; died June 25.
30	Daniel Dewey,	English, ..	Miner,	44	M	1	6	Baltimore No. 1, ..	Westmoreland,	Fatally injured by a fall of slate.
July 7	Frank Weiss,	Austrian, ..	Miner,	20	M	1	1	Greensburg No. 9, ..	Westmoreland,	Injured by a fall of coal; died Aug. 4.
11	Nickel Jim,	Italian,	Miner,	46	M	1	3	Penn Gas No. 5, ..	Westmoreland,	Injured by a fall of coal; died Aug. 9.
Aug. 1	Michael Barao,	German, ..	Miner,	55	M	1	1	Jamison No. 2,	Indiana,	Instantly killed by a fall of roof.
11	Frank Stopenek, ..	German, ..	Miner,	36	M	1	1	Claridge,	Westmoreland,	Instantly killed by a fall of roof.
13	Muel Angelo,	Italian,	Miner,	36	M	1	4	Millwood,	Westmoreland,	Instantly killed by a fall of roof.
23	George Chas,	Slavonic, ..	Miner,	40	M	1	1	Puritan,	Westmoreland,	Injured by a fall of roof; died Sept. 9.
28	Edward Hughes, ..	American, ..	Miner,	40	M	1	2	Greensburg No. 3, ..	Westmoreland,	Instantly killed by being caught by a revolving shaft at coke crusher.
30	John Etnier,	Slavonic, ..	Coke employee,	28	M	1	1	Gravelton No. 2, ..	Indiana,	Instantly killed by being caught by a revolving shaft at coke crusher.

TABLE IV—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Sept.	4 Thomas Smith.	American.	All other employees.	19	S.	.....	.....	Jamison No. 4.	Westmoreland.	Instantly killed by being struck on back of head by descending cage at top of landing.
	4 Jacob Minsinger.	German.	Miner.	42	M.	1	3	Greensburg No. 3.	Westmoreland.	Instantly killed by a fall of coal; died Sept. 6.
	10 Andrew Kead.	Polish.	Miner.	26	S.	.....	.....	Lyons Run.	Westmoreland.	Instantly killed by a fall of slate.
Oct.	9 Frank Licut.	Austrian.	Miner.	27	S.	.....	.....	Lyons Run.	Westmoreland.	Instantly killed by a fall of coal.
	9 Ross Lee.	American.	All other employees.	35	S.	.....	.....	Penn Gas No. 2.	Westmoreland.	Suffocated by dynamite fumes in new air shaft.
	10 Anthony Siaraulic.	Italian.	Miner.	35	M.	1	4	Jamison No. 1.	Westmoreland.	Instantly killed by a fall of slate.
	11 Frank Weaver.	Bohemian.	Miner.	33	M.	1	.....	Penn Gas No. 2.	Westmoreland.	Instantly killed by a fall of slate.
	21 A. F. Anderson.	American.	Driver.	28	S.	.....	.....	Baltimore No. 1.	Westmoreland.	Instantly killed by a fall of slate.
Nov.	7 Michael Fox.	English.	Miner.	27	M.	1	7	Loyalhanna No. 1.	Westmoreland.	Instantly killed by a fall of slate.
	12 Frank Allagrimis.	Italian.	Miner.	37	M.	1	4	Loyalhanna No. 1.	Westmoreland.	Instantly killed by a fall of slate.
	22 Andrew Morris.	Russian.	Miner.	32	M.	1	4	Penn Gas No. 5.	Westmoreland.	Injured by a fall of coal and slate; died November 26.
Dec.	4 Peter Viskoski.	Russian.	Miner.	39	M.	1	1	Penn Manor.	Westmoreland.	Injured by a fall of slate; died December 21.
	5 Mike Kushinsky.	Polish.	Miner.	35	M.	1	3	Monastery.	Westmoreland.	Fatally injured by a fall of roof.

TABLE V—List of non-fatal accidents that occurred in and about the mines of the Second Bituminous District for the year ending December 31, 1902.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan. 4	Frank Leonard	American	Driver	34	M.	Madison	Westmoreland	Back injured by a fall of coal.
7	Stanley Babisko	Polish	Miner	33	S.	M. Saxman	Westmoreland	Leg broken and back injured by a fall of roof.
16	Edward Favorite	American	Driver	48	S.	Denmark	Westmoreland	Arm broken; thrown from car.
21	Alexander McKay	American	Miner	14	S.	Alexandria	Westmoreland	Leg broken; caught between cars.
25	John Virdenque	Austrian	Miner	45	M.	Baltimore No. 1	Westmoreland	Leg broken by a fall of coal.
29	George Hayden	American	Miner	53	M.	Carlson	Westmoreland	Back broken by a fall of slate.
30	Joseph Hurkey	Austrian	Driver	47	M.	Millwood	Westmoreland	Injured; fell from mine car.
8	Thomas Grant	Scottish	Miner	41	S.	Baltimore No. 1	Westmoreland	Severely injured by a fall of slate.
13	John Anderson	Swedish	All other employees	21	S.	Alexandria	Westmoreland	Leg broken; caught between mine cars.
14	Mealie Palletin	Slovakian	Driver	21	S.	Larimer	Westmoreland	Leg crushed; run over by cars.
17	James Habbuck	Bohemian	Miner	30	M.	Penn Gas No. 2	Westmoreland	Leg broken by a fall of coal.
17	Joseph Thompson	Polish	Miner	26	S.	Madison	Westmoreland	Hand injured by a fall of slate.
25	John Stowsky	Polish	Miner	30	M.	Alexandria	Westmoreland	Leg broken by a fall of slate.
25	John Stowsky	Polish	Miner	58	M.	Larimer	Westmoreland	Ankle dislocated by fall of slate.
4	George H. H. H.	Irish	Miner	29	S.	Hemp shaft	Westmoreland	Leg crushed by fall of roof.
8	James McCabe	American	Miner	39	M.	Penn Gas No. 2	Westmoreland	Both legs broken by a fall of coal.
16	George Dragon	Irish	Miner	42	M.	Derry shaft	Westmoreland	Leg broken by a fall of slate.
18	Mike Soketa	Slovakian	Miner	24	S.	Lyons Run	Westmoreland	Leg broken by a fall of slate.
23	Archangel Bonasdi	Italian	Miner	52	S.	Denmark	Westmoreland	Foot fractured by a fall of slate.
23	Thomas Prescott	American	Driver	34	S.	Denmark	Westmoreland	Leg fractured by a fall of slate.
9	Jos. Pechman	Bohemian	Miner	23	S.	Latrobe No. 1	Westmoreland	Leg broken between car and pillar.
15	Andrew Yacovelsky	Austrian	Miner	25	S.	Whitney	Westmoreland	Hip injured by a fall of slate.
16	Edward I. Kallap	American	Miner	21	M.	Alexandria	Westmoreland	Shoulder broken; caught between cars.
20	Henry Adamson	American	Driver	29	M.	Salem	Westmoreland	Leg broken; caught by car.
31	Steve Cayneck	Polish	Miner	25	S.	Salem	Westmoreland	Back broken by a fall of slate.
31	John Ostroevich	Polish	Miner	29	S.	Salem	Westmoreland	Back and breast crushed by a fall of slate.
31	Peter Reese	German	All other employees	40	M.	Ocean No. 1	Westmoreland	Face and hands burned by blown out shot.
31	Frank Webb	American	Driver	17	S.	Ocean No. 1	Westmoreland	Bruiused about body by blown out shot.
31	Frank Homus	Polish	Miner	30	M.	Ocean No. 1	Westmoreland	Arm broken by blown out shot.
9	Dimitrak Perendo	Italian	Miner	22	M.	Jameson No. 1	Westmoreland	Injured by a fall of slate.
20	Joseph Chatula	Slovakian	Miner	43	M.	S. Clair	Westmoreland	Jaw fractured by a fall of slate.

TABLE V—Continued.

Date of accident.	Name of Person.	Nativity of birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
July	20 John Neuman,	Hungarian,	Miner,	43	S. M.	Penn Gas No. 2,	Westmoreland,	Leg broken by a fall of coal and slate.
	11 Chas. Balkin,	American,	Driver,	19	S. M.	Lockport,	Westmoreland,	Leg bruised by car.
	12 Joe Pontania,	Irish,	All other employees,	19	M. M.	Pandora,	Westmoreland,	Both legs broken; caught under cage.
	19 Joseph Clark,	Irish,	Miner,	41	M. M.	Atlantic No. 2,	Westmoreland,	Leg broken by fall of slate.
	23 Martin Mulrady,	Italian,	Miner,	40	M. M.	Loyalhanna Nos. 1 & 2,	Westmoreland,	Injured between cage and shaft timbers.
Aug.	23 David Harris,	American,	Miner,	45	M. M.	Ocean No. 2,	Westmoreland,	Leg crushed by a fall of slate.
	28 Alex Kaucetz,	Hungarian,	Machine loader,	41	M. M.	Ocean No. 2,	Westmoreland,	Leg fractured; caught between cars.
	Steve Humbusky,	Slovakian,	Driver,	18	S. S.	Hosletter,	Westmoreland,	Leg broken; caught between car and post.
	11 Charles Weyburg,	Swedish,	Miner,	30	S. S.	Carbon,	Westmoreland,	Leg broken; caught between mining machine and coal pillar.
	27 Blas Bearoff,	Russian,	Miner,	27	S. S.	Westmoreland shaft,	Westmoreland,	Injured; caught between car and coal pillar.
Sept.	29 Willis Sowers,	Scottish,	Driver,	24	S. S.	Mitchell,	Indiana,	Leg fractured; caught between car and coal pillar.
	30 Joseph Oberly,	Slavonic,	All other employees,	45	M. M.	Mitchell,	Indiana,	Leg broken by a fall of coal.
	5 Antonia Domiani,	Italian,	Miner,	46	M. M.	Jamison No. 2,	Westmoreland,	Leg broken by a fall of slate.
	18 John Edges,	English,	Miner,	36	M. M.	Ocean No. 1,	Westmoreland,	Leg broken by a fall of slate.
	24 Carmel Cirocchi,	Italian,	Miner,	38	M. M.	Baltimore No. 1,	Westmoreland,	Back sprained; caught between cars.
Oct.	30 Harry Crawford,	American,	All other employees,	30	M. M.	Danohoe,	Westmoreland,	Leg broken by a fall of slate.
	1 Edward Fisher,	German,	Miner,	30	S. S.	Greensburg No. 3,	Westmoreland,	Bruised by flying coal from dynamite blast while tamping.
	2 Loney Debowne,	Italian,	Miner,	35	S. S.	Jamison No. 1,	Westmoreland,	Bruised by flying coal from dynamite blast while tamping.
	Frank Mash,	Italian,	Miner,	23	S. S.	Jamison No. 1,	Westmoreland,	Leg crushed by breaking of rail, necessitating amputation.
	8 Enoch McComar,	Slavonic,	Miner,	52	M. M.	Jamison No. 1,	Westmoreland,	Back injured by a fall of coal.
Nov.	9 Alex Hill,	American,	Miner,	52	M. M.	Atlantic No. 2,	Westmoreland,	Shoulder injured; caught between car and coal pillar.
	24 Frank Kusinski,	Slavonic,	All other employees,	16	S. S.	Latrobe,	Westmoreland,	Leg broken by a fall of slate.
	27 Mike Ramowski,	Russian,	Miner,	45	M. M.	Larimer,	Westmoreland,	Arm fractured; struck by crane crank.
	31 Harry L. Hill,	English,	Miner,	18	M. M.	Madison,	Westmoreland,	Severely injured; run over by cars.
	5 John Wassar,	Slavonic,	All other employees,	22	M. M.	Denmark No. 1,	Westmoreland,	Foot crushed by a fall of slate.
	7 Clark Roth,	American,	Driver,	57	M. M.	Penn Gas No. 1,	Westmoreland,	Leg broken by a fall of slate, necessitating amputation.
	11 John Butler,	German,	Miner,	57	M. M.	Penn Gas No. 1,	Westmoreland,	
	John Powell,	English,	Miner,	45	M. M.	Ocean No. 1,	Westmoreland,	

Dec.	28	Charles Jamery,	Italian,	Miner,	38	M.	Donohoe,	Westmoreland,	Leg crushed and arm broken by a fall of coal.
	1	Robert Lancy,	Scotch,	Miner,	35	M.	Penn Gas No. 5,	Westmoreland,	Leg broken by a fall of slate.
	2	Charles McCain,	Scotch,	Miner,	38	S.	Sewickley,	Westmoreland,	Leg broken by a fall of coal.
	3	Joseph Haddock,	Italian,	Miner,	34	M.	Donohoe,	Westmoreland,	Injured by a fall of slate.
	8	Felix Pastore,	Italian,	Miner,	42	M.	Jamison No. 1,	Westmoreland,	Leg broken and otherwise injured; struck by haulage rope.
	12	Joseph Straka,	Slavonic, ...	Driver,	24	M.	Graceton No. 2,	Indiana,	Hip dislocated; caught between car and coal pillar.
	22	Sampson Rodin,	English, ...	All other employees, 45	45	M.	Mitchell,	Indiana,	Both legs broken; struck by runaway car.



Third Bituminous District.

ALLEGHENY, ARMSTRONG, BUTLER, BEAVER, CLARION, LAWRENCE, JEFFERSON, MERCER AND WESTMORELAND COUNTIES.

Mercer, Pa., February 25, 1903.

Hon. James W. Latta, Secretary of Internal Affairs:

Sir: As required by the Bituminous Mining Act, approved May 15, 1893, I herewith transmit my annual report of the Third Bituminous District for the year ending December 31, 1902.

There has been an increase of eight in the number of fatal accidents in this district during the year, but a reduction of four in the number of serious non-fatal ones. At least seven of the fifteen fatal accidents reported were due to the unfortunate persons not having used ordinary precautions to insure safety, such as posting their working places properly, and the greater number of the serious non-fatal ones were also due to similar neglect.

During the year the coal production of this district increased 927,118 tons over that of 1901, and the number of employes in and about the mines increased 1,342.

Twenty-two additional mines have been added to the list of mines of this district.

As a whole the operators and miners of this district have shared in the general prosperity of the coal business during the year, but they would have experienced it in a more marked degree had the supply of railroad cars been equal to the demand, but it was this year the same as it was in the year 1901, very inadequate, thereby causing much broken time and annoyance at many of the mines. At the mines along the West Penn Railroad there was a strike, which lasted three months at some of them. Otherwise harmony between the operators and the miners has prevailed in all the other parts of the district.

A brief description of the new and the old mines of the district, with the usual statistical matter, etc., in connection therewith, will be found in another part of the report.

Respectfully submitted,

THOMAS K. ADAMS,
Inspector.

Summary of Statistics for 1902.

Number of mines in district,	122
Number of mines in operation during 1902,	122
Number of tons of coal produced,	6,531,197
Number of tons shipped to market,	6,068,804
Number of tons sold at mines to local trade,	143,828
Number of tons consumed at mines in generating steam and heat,	318,565
Number of coke ovens in the district,	418
Number of coke ovens in operation during 1902,	418
Number of tons of coke produced,	168,898
Number of tons of coal used in manufacture of coke, ap- proximately,	287,126
Number of tons produced by pick mining,	5,266,241
Number of tons produced by compressed air machines, ..	1,068,452
Number of tons produced by electrical machines,	196,504
Number of persons employed inside the mines,	8,916
Number of persons employed outside, including coke	
Number of persons employed per fatal accident outside, ..	1,237
Number of persons employed at manufacture of coke, ..	145
Number of fatal accidents inside the mines,	14
Number of tons produced for each fatal accident inside, ..	466,514
Number of persons employed per fatal accident inside, ..	637
Number of fatal accidents outside,	1
Number of persons employed per fatal accident outside, ..	1,237
Number of wives made widows by fatal accidents,	6
Number of children orphaned by fatal accidents,	16
Number of non-fatal accidents inside of mines,	35
Number of persons employed per non-fatal accident in- side,	254
Number of non-fatal accidents outside,	2
Number of persons employed per non-fatal accident out- side,	618
Number of steam locomotives used inside,	4
Number of electric motors used inside,	12
Number of fans used for ventilation,	61
Number of furnaces used for ventilation,	52
Number of gaseous mines in operation during 1902,	3
Number of non-gaseous mines in operation during 1902, ..	119
Number of new mines opened in 1902,	22

A. Production of Coal during the Year 1902.

Names of Companies.	Tons.
Acme Coal Mining Company,	45,278
Avondale Mining and Manufacturing Company,	30,954
Jos. G. Beale & Co.,	87,193
Avonmore Coal and Coke Company,	57,293
Allegheny Coal and Coke Company,	39,432
Anderson Run Coal Company,	65,000
Butts Cannel Coal Company,	43,800
Brackenridge Coal Company,	40,620
Beaver Coal and Coke Company,	90,201
Sharon Coal and Limestone Company,	59,150
Braeburn Steel Company,	19,680
Keystone Mining Company,	94,376
Lewis Coal Company,	52,972
Bagdad Coal and Coke Company,	35,283
Logansport Coal Company,	13,398
Peale, Peacock & Kerr, Incorporated,	53,352
Carrier Brothers,	45,010
Erie Coal Mining Company,	10,549
Pittsburg Plate Glass Company,	77,072
Cowansville Mining Company,	52,834
Chicora Coal and Coke Company,	17,425
Cherry Run Coal Mining Company,	31,591
W. F. Clayton,	10,529
Cornwall Coal Company,	81,340
Carver Coal Company,	53,132
Hamilton Coal Mining Company,	45,898
Catfish Run Coal Company,	26,755
The Allegheny Coal Company,	37,468
Westerman, Filer & Co., formerly Filer, Suliff & Co.,...	213,825
The Hedstrom Coal Mining Company,	29,569
James W. Ganoe,	27,649
Addison Davidson,	3,927
P. D. Sherwin,	52,198
Eagle Coal Co., Inc., formerly Jos. & M. A. Lehmer,...	44,148
Wampum Run Coal Company,	44,220
Grove Coal Company,	68,115
Fairmount Coal Company,	320,504
Gilpin Coal Company,	57,050
Pittsburg Coal Company,	68,937
F. A. Mizener,	110,932
Leechburg Coal and Coke Company,	50,193
McFetridge Brothers,	81,802

Hill Coal Company, Limited,	59,600
Frank Williams & Co.,	16,470
Haddon Coal Company,	37,140
Jefferson, Clearfield Coal and Iron Company,	1,673,932
Pittsburg and Buffalo Company,	121,300
Pardoe Coal Company,	138,235
American Sheet Steel Company,	23,773
Kittanning Plate Glass Company,	10,182
Turner Coal, Coke and Mining Company,	70,120
Kerr Coal Company,	66,700
Lucesco Coal Company,	18,909
Ben Franklin Coal Company,	30,050
Monterey Coal Company,	28,837
Pittsburg Plate Glass Company,	87,823
Mark Packard,	15,129
Nellie Coal Company,	18,203
Pennsylvania Salt Manufacturing Company,	179,978
C. P. McCafferty,	48,902
Oak Ridge Mining Company,	212,303
Ellis Blum Company,	1,500
Pine Run Coal and Coke Company,	47,311
The Pollock Coal and Lime Company,	4,045
New York and Cleveland Gas Coal Company,	427,444
Royle Coal Company,	16,625
George E. Tener,	27,915
Riverview Coal and Mining Company, Limited,	69,291
Roaring Run Coal and Coke Company,	22,736
George G. Stage,	18,151
Mercer Iron and Coal Company,	97,622
Sterling Mining Company or W. H. Warner,	12,900
Standard Coal Mining Company,	32,000
Campbell, Lowther Coal Company,	14,823
Sligo Coal Mining Company, formerly Sligo Coal Co.,...	25,591
State Line Coal Company,	90,692
Shenango Coal Company,	7,563
Thompson Run Coal Company,	84,225
Underwood Mining Company,	1,100
Valley Coal Company,	20,782
West Penn Mining Company,	27,674
The Wahlville Coal Company,	40,615
William K. Hamilton,	6,100
Brier Hill Block Coal Company,	5,100
Butler Coal and Coke Company,	401
Hickory Coal Co., Limited,	28,004
Sterling Coal Company,	44,734

Evans City Coal Co.,	1,100
Darlington Brick and Mining Co.,	7,000
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Total,	6,531,197
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Production of Coal for the Counties Comprising this District During
the Year 1902.

Names of Counties.	Tons.
Armstrong,	1,270,526
Allegheny,	1,034,093
Butler,	482,922
Beaver,	234,273
Clarion,	453,292
Lawrence,	191,811
Jefferson,	1,837,294
Mercer,	690,871
Westmoreland,	336,115
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Total,	6,531,197
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E. Occupations of Employees Killed or Fatally Injured Inside and Outside the Mines of the Third Bituminous District During 1902.

Months.	Inside.										Outside.										Grand total.
	Mine foremen.	Assistant mine foremen.	Fire bosses.	Miners.	Machine runners.	Machine loaders.	Machine scrapers.	Drivers and runners.	Boor-boys and helpers.	Company men.	All other employes.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	Coke employes.	Book-keepers and clerks.	All other employes.	Total outside.	
January,	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
April,	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
May,	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
June,	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
July,	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
September,	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
October,	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
November,	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
December,	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Totals,	13	1	1	1	1	1	1	1	1	1	1	14	1	1	1	1	1	1	1	1	15

G. Nationality of Employes Killed or Fatally Injured Inside and Outside the Mines During 1902.

	Americans.	English.	Scotch.	Irish.	Italians.	Russians.
January,					1	
April,					1	
May,	1	1	1			
June,					2	
July,					1	
September,	1				1	
October,	2				1	
November,						1
December,				1	1	
Totals,	4	1	1	1	7	1

H. Nationality of Employes Severely Injured Inside and Outside the Mines During 1902.

	Americans.	English.	Scotch.	Germans.	Poles.	Hungarians.	Italians.	Slavonians.	Tyrolean.
January,	7	1	1						1
February,	2								
March,	1						1		2
April,	1						1		
May,	1								
June,	2						1		
July,	2						1		
September,	1				3		1	1	
October,				1			1	1	
November,	1							1	
December,		1				1	1		
Totals,	18	2	1	1	3	1	5	3	3

[illegible]

TABLE I—Continued.

Names of Operators and Mines	Kind of opening.	Gaseous or non-gaseous.	Method of ventilation.	Diameter and width of fan in feet.	Name of fan.	Power used.	Area of furnace bars in square feet.	Number of air splits of air currents.	Number of cubic feet of air per minute entering the mine at inlet.	Total quantity of air per minute circulating in all splits in cubic feet.	Number of cubic feet per minute passing out at out- let.	Number of persons employed inside.	Average number of cubic feet per minute provided for each person.
Hamilton Coal Mining Co. Crag Dell,	Drift, ...	Non-gas.	Fan,	7 x 18	Stiem,	Steam, .....	.....	1	16,000	16,000	18,000	35	486
Catfish Run Coal Co. Catfish Run,	Drift, ...	Non-gas.	Furnace, .....	.....	.....	.....	24	1	6,000	6,000	8,000	37	189
The Allegheny Coal Co. Harwick,	Shaft, ...	Gaseous,	Fan,	12 x 8	Capell,	Steam, .....	.....	2	22,000	22,000	22,000	60	440
Westerman, Eller & Co. Diamond No. 1,	Shaft, ...	Non-gas.	Fan,	10 x 3.5	Brazil,	Steam, .....	.....	2	12,200	12,200	15,000	110	124
Diamond No. 2,	Shaft, ...	Non-gas.	Fan,	10 x 3.5	Brazil,	Steam, .....	.....	2	9,000	9,000	9,000	88	106
The Hedstrom Coal Mining Co. Dutch Hill,	Drift, ...	Non-gas.	Furnace, .....	.....	.....	.....	20	1	3,500	3,500	3,500	85	100
James W. Gano. Diamond,	Drift, ...	Non-gas.	Furnace, .....	.....	.....	.....	21	1	6,500	6,500	6,760	40	166
Darlington Brick & Mining Co. Darlington,	Drift, ...	Non-gas.	Furnace, .....	.....	.....	.....	12	1	2,800	2,800	2,800	17	165
Addison Davidson. Davidson,	Drift, ...	Non-gas.	Furnace, .....	.....	.....	.....	24	1	4,000	4,000	4,000	10	400
P. D. Sherwin. Enterprise,	Drift, ...	Non-gas.	Shaft & stack, Fan, .....	.....	.....	.....	.....	2	3,000	3,000	3,000	15	200
Sherwin,	Slope, ...	Non-gas.	.....	10 x 3.5	Brazil,	Steam, .....	.....	1	8,000	8,000	8,740	25	335
Eagle Coal Co., Inc. Eagle,	Drift, ...	Non-gas.	Furnace, .....	.....	.....	.....	24	2	7,200	7,200	10,500	45	137

Wampum Run Coal Co.	Drift.	Non-gas.	Fan.	10 x 3.5	Brazil.	Gasoline.	.....	1	9,000	9,000	10,200	65	147
Excelsior No. 4.	.....	Non-gas.	Fan.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grove Coal Co.	Shaft.	Non-gas.	Fan.	6 x 15	Clark.	.....	.....	1	9,000	9,000	9,000	76	118
Fairmount Coal Co.	Drift.	Non-gas.	Fans (2).	8 x 15	Clark.	.....	.....	2	22,000	22,000	22,000	130	169
Fairmount No. 1.	Drift.	Non-gas.	Fan.	6 x 15	Clark.	.....	.....	1	8,500	18,500	9,000	60	146
Fairmount No. 2.	Drift.	Non-gas.	Fan.	6 x 15	Clark.	.....	.....	2	13,000	13,000	13,200	58	226
Fairmount No. 4.	Drift.	Non-gas.	Fan.	6 x 15	Clark.	.....	.....	.....	.....	.....	.....	.....	.....
Evans City Coal Co.	Shaft.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gilpin Coal Co.	Drift.	Non-gas.	Furnace.	.....	.....	.....	.....	35	20,000	20,000	25,000	83	271
Pittsburg Coal Co.	Slope.	Non-gas.	Fan.	12 x 4	Vulcan.	.....	.....	2	10,500	10,500	11,000	80	134
Glenshaw.	Drift.	Non-gas.	Fan.	12 x 4	Brazil.	.....	.....	2	10,000	10,000	11,000	70	150
F. A. Mizener.	Drift.	Non-gas.	Furnace.	.....	.....	.....	.....	24	12,000	12,000	13,800	40	646
Grant.	Drift.	Non-gas.	Furnace.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Leechburg Coal & Coke Co.	Drift.	Non-gas.	Furnace.	.....	.....	.....	.....	24	10,000	10,000	10,000	47	213
Hill.	Drift.	Non-gas.	Furnace.	.....	.....	.....	.....	35	18,000	18,000	18,700	45	498
River View.	Drift.	Non-gas.	Furnace.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
McPetridge Brothers.	Drift.	Gaseous.	Fan.	12 x 4	Vulcan.	.....	.....	2	25,000	25,000	29,700	84	325
Hill Coal Co., Limited.	Drift.	Non-gas.	Fan.	10 x 3.5	Brazil.	.....	.....	1	15,000	15,000	16,000	70	221
Frank Williams & Co.	Drift.	Non-gas.	Furnace.	.....	.....	.....	.....	24	6,000	6,000	6,000	30	200
Hillville.	Drift.	Non-gas.	Furnace.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Haddon Coal Co.	Drift.	Non-gas.	Furnace.	.....	.....	.....	.....	22	10,000	10,000	12,000	42	262
Hickory Coal Co., Limited.	Shaft.	Non-gas.	Fan.	10 x 3.5	Brazil.	.....	.....	1	8,800	8,800	9,000	32	278
Jefferson.	Drift.	Non-gas.	Fans (2).	6 x 15	Clark.	.....	.....	4	23,000	23,000	33,000	155	215
Wampum Run No. 1.	Drift.	Non-gas.	Fan.	24 x 8	Cubal.	.....	.....	5	50,000	50,000	50,000	315	158
Saddle Run No. 2.	Drift.	Non-gas.	Fan.	6 x 15	Clark.	.....	.....	2	12,000	12,000	12,000	120	100
Malden.	Drift.	Non-gas.	Fan.	6 x 15	Clark.	.....	.....	2	18,000	18,000	13,000	97	186
Railroad.	Drift.	Non-gas.	Fan.	6 x 15	Clark.	.....	.....	2	15,750	15,750	16,000	125	127
Sherwood.	Drift.	Non-gas.	Fan.	6 x 15	Clark.	.....	.....	1	12,000	12,000	13,000	30	430
Trout Run.	Drift.	Non-gas.	Fans (2).	6 x 15	Clark.	.....	.....	2	27,000	27,000	28,000	80	348
Virginia.	Drift.	Non-gas.	Fan.	6 x 15	Clark.	.....	.....	3	18,000	18,000	18,000	93	153

TABLE I—Continued.

Names of Operators and Mines.	Kind of opening.	Gaseous or non-gaseous.	Method of ventilation.	Diameter and width of fan.	Name of fan.	Power used.	Area of furnace bars in square feet.	Number of air splits of air currents.	Number of cubic feet of air per minute entering the mine at inlet.	Total quantity of air per minute circulating in all splits in cubic feet.	Number of cubic feet per minute passing out at outlet.	Number of persons employed inside.	Average number of cubic feet per person provided for each person.
Pittsburg and Buffalo Co. Johnetta No. 1..... Johnetta No. 2.....	Drift. Shaft.	Non-gas. Non-gas.	Fan.....	4 x 3	Capell.....	Electricity.....	.....	3	20,000	20,000	20,000	90	222
"K." Pardoe Coal Co. Pardoe.....	Drift. Drift.	Non-gas. Non-gas.	Fan..... Fan.....	10 x 3.5 10 x 3.5	Brazil..... Brazil.....	Steam..... Steam.....	.....	2 3	11,000 20,000	11,000 20,000	11,150 22,000	65 113	170 185
American Sheet Steel Co. Kirkpatrick.....	Drift.	Non-gas.	Furnace.....	.....	.....	.....	20	1	12,000	12,000	12,900	20	622
Kittanning Plate Glass Co. Kittanning.....	Drift.	Non-gas.	Furnace.....	.....	.....	.....	15	1	4,500	4,500	5,000	18	261
Turner Coal, Coke & Mining Co. Keystone No. 1..... Keystone No. 2.....	Drift. Drift.	Non-gas. Non-gas.	Fan..... Furnace.....	8 x 3	Brazil.....	Steam.....	..... 24	1 1	5,500 4,500	5,500 4,500	5,500 4,500	73 7	75 643
Kerr Coal Co. Kerr No. 1..... Kerr No. 8.....	Drift. Drift.	Non-gas. Non-gas.	Furnace..... Furnace.....	.....	.....	.....	14 30	1 2	8,000 18,000	8,000 18,000	8,750 19,600	16 68	523 276
Lucas Coal Co. Lucas..... Ben Franklin Coal Co. Metzall.....	Drift. Drift.	Non-gas. Non-gas.	Fan..... Furnace.....	6 x 15	Stiem.....	Steam.....	.....	1	.....	.....	.....	.....	.....
Monterey Coal Co. Monterey..... Pittsburg Plate Glass Co. Mosgrove.....	Drift. Drift.	Non-gas. Non-gas.	Furnace..... Furnace.....	.....	.....	.....	21 24	.....	8,000 10,000	8,000 10,000	8,400 11,150	40 35	205 312
	Drift.	Non-gas.	Furnace.....	.....	.....	.....	24	2	17,500	17,500	18,000	60	296

Mark Packard.														237
Mahoning,	.....	Drift.	Non-gas.	Furnace,	.....				12	1	4,500	4,500	5,000	16
Nellie,	.....	Slope,	Non-gas.	Fan,	.....	10 x 3.5	Brazil,	.....	.....	1	15,000	15,000	15,000	60
Penn'a Salt Mfg. Co.		Drift.	Non-gas.	Fan,	.....	16 x 4	Brazil,	.....	.....	3	28,000	28,000	28,000	145
Natrona No. 1,	.....	Drift.	Non-gas.	Fan,	.....	12 x 3	Brazil,	.....	.....	1	20,000	20,000	20,000	25
C. P. McCafferty.		Drift.	Non-gas.	Fan,	.....	8 x 3	Brazil,	.....	.....	1	9,500	9,500	10,000	55
Monarch,	.....	Drift.	Non-gas.	Fan,	.....	6 x 15	Clark,	.....	.....	2	20,000	20,000	21,000	140
Oak Ridge Mining Co.		Drift.	Non-gas.	Fan,	.....	6 x 15	Clark,	.....	.....	2	12,000	12,000	12,000	36
Oak Ridge No. 3,	.....	Drift.	Non-gas.	Fan,	.....									333
Oak Ridge No. 2,	.....	Drift.	Non-gas.	Fan,	.....								
Oceanica,	.....	Drift.	Non-gas.	Fan,	.....								
Pine Run Coal & Coke Co.		Drift.	Non-gas.	Furnace,	.....								
Pine Run No. 1,	.....	Drift.	Non-gas.	Furnace,	.....					2	19,000	19,000	19,500	35
Pine Run No. 2,	.....	Drift.	Non-gas.	Furnace,	.....					1	6,000	6,000	6,000	22
The Pollock Coal and Lime Co.		Drift.	Non-gas.	Furnace,	.....								
Pollock,	.....	Drift.	Non-gas.	Furnace,	.....								
N. Y. & Cleveland Gas Coal Co.		Drift.	Non-gas.	Furnace,	.....					5	40,000	40,000	40,000	175
Run Creek,	.....	Drift.	Non-gas.	Furnace,	.....					4	23,500	23,500	23,600	170
Sandy Creek,	.....	Drift.	Non-gas.	Furnace,	.....									138
Boyle Coal Co.		Drift.	Non-gas.	Furnace,	.....					24	11,000	11,000	11,500	21
Boyle,	.....	Drift.	Non-gas.	Furnace,	.....									544
George E. Tenner.		Drift.	Non-gas.	Furnace,	.....					24	6,000	6,000	7,200	40
Rock Point,	.....	Drift.	Non-gas.	Furnace,	.....									165
Riverview Coal Mining Co., Ltd.		Drift.	Non-gas.	Fan,	.....	16 x 5	Scottdale,	.....	.....	2	20,000	20,000	21,000	127
Riverview,	.....	Drift.	Non-gas.	Furnace,	.....									164
Rearing Run Coal & Coke Co.		Drift.	Non-gas.	Furnace,	.....					24	8,000	8,000	8,150	40
Rearing Run,	.....	Drift.	Non-gas.	Furnace,	.....									292
George G. Stage.		Drift.	Non-gas.	Furnace,	.....					20	9,000	9,000	9,500	25
Stage,	.....	Drift.	Non-gas.	Furnace,	.....									370
Messer Iron and Coal Co.		Slope,	Non-gas.	Fan,	.....	10 x 3.5	Brazil,	.....	.....	2	10,000	10,000	12,000	110
Stanhope No. 3,	.....	Slope,	Non-gas.	Fan,	.....									100
Sterling Mining Co.		Drift.	Non-gas.	Fan,	.....	10 x 3.5	Brazil,	.....	.....	1	12,000	12,000	12,000	27
Sterling,	.....	Drift.	Non-gas.	Fan,	.....									444

*Power not installed.

TABLE I—Continued.

Names of Operators and Mines.	Kind of opening	Gaseous or non-gaseous.	Method of ventilation.	Diameter and width of fan in feet.	Name of fan.	Power used.	Area of furnace bars in square feet.	Number of air splits of air currents.	Number of cubic feet of air per minute entering the mine at inlet.	Total quantity of air per minute circulating in all splits in cubic feet.	Number of cubic feet per minute passing out at out- let.	Number of persons employed inside.	Average number of cubic feet per minute provided for each person.
Standard Coal Mining Co. Standard,	Drift, ...	Non-gas.	Furnace, .....	.....	.....	.....	20	2	9,500	9,500	9,600	37	258
Campbell, Lowther Coal Co. Standard,	Drift, ...	Non-gas.	Furnace, .....	.....	.....	.....	15	1	4,000	4,000	4,500	35	121
Sterling Coal Co. Sterling,	Drift, ...	Non-gas.	Furnace, .....	.....	.....	.....	17.5	1	5,000	5,000	7,830	42	152
Sligo Coal Mining Co. Sligo,	Drift, ...	Non-gas.	Furnace, .....	.....	.....	.....	24	1	6,000	6,000	8,000	25	280
State Line Coal Co. State Line,	Drift, ...	Non-gas.	Fan,	12 x 4	Brazil,	Steam, .....	.....	2	36,000	36,000	36,000	104	346
Shenango Coal Co. Shenango,	Shaft, ...	Non-gas.	Exhaust steam, .....	.....	.....	.....	.....	2	5,000	5,000	5,000	46	108
Thompson Run Coal Co. Thompson Run,	Drift, ...	Non-gas.	Fan,	6 x 15	Clark,	Gasoline, .....	.....	2	10,000	10,000	10,800	80	130
Underwood Mining Co. Underwood,	Drift, ...	Non-gas.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Valley Coal Co. Valley,	Drift, ...	Non-gas.	Fan,	10 x 3.5	Brazil,	Steam, .....	.....	3	12,000	12,000	12,000	34	353
West Penn Mining Co. West Penn,	Drift, ...	Non-gas.	Furnace, .....	.....	.....	.....	28	2	16,000	16,000	20,000	43	419

The Wahville Coal Co.		Non-gas.		Fan.		10 x 3.5		Brazil,		Steam.		15,000		16,000		18,000		68		229	
Wahville No. 1,	Shaft, ...	Non-gas.	...	Fan.	...	10 x 3.5	...	Brazil,	...	Steam.	...	15,000	...	16,000	...	18,000	...	68	...	229	...
Wahville No. 2,	Drift, ...	Non-gas.	...	Fan.	...	10 x 3.5	...	Brazil,	...	Steam.	...	16,000	...	16,000	...	18,000	...	11	...	1,545	...
Wm. K. Hamilton.																					
Wildwood,	Drift, ...	Non-gas.	...	Furnace,	...		...		...		...	1,200	...	1,200	...	1,200	...	9	...	133	...
Brier Hill Block Coal Co.																					
Brier Hill Block Coal,	Shaft, ...	Non-gas.	...	Exhaust steam.	...		...		...		...	4,200	...	4,200	...	4,200	...	2	...	210	...

J. Names of mines using coal cutting machines, names of machines, power used, geological and local names of seams, thickest and thinnest seams where machines are used, and the approximate number of tons produced by machines during 1902.

Name and number of machines in use.	Kind of opening.	Gaseous or non-gaseous.	Total machines used.							Power used by machines.	Geological and local name of seam.	Average thickness in inches.			Height of seam in inches.	Approximate number of tons produced by machines.
			Ingersoll.	Sullivan.	Harrison.	Jeffrey.	Morgan-Clardner.	Goodman.	Brown.			Link belt.	Thickest.	Thinnest.		
Acme.	Drift.	Non-gaseous	11	4							Compressed air.	Lower Kittanning, Bed B.	47	54	40	9,284
Beale.	Drift.	Non-gaseous	1	6	2						Compressed air.	Upper Freeport, Bed E.	51	42	40	29,876
Beaver Nos. 1 and 2.	Drift.	Non-gaseous									Compressed air.	Upper Kittanning of Fair- bankville, Bed A.				
Hubb Nos. 1 and 2.	Shafts.	Non-gaseous			10						Compressed air.	Brookville, Bed A.	36	36	36	23,260
Brady - Bond.	Drift.	Non-gaseous				3					Electricity.	Lower Kittanning, Bed B.	43	50	36	49,150
Chesapeake No. 3.	Drift.	Non-gaseous	2								Compressed air.	Lower Freeport, Bed D.	66	66	66	22,000
Carnot.	Drift.	Non-gaseous		1	5						Compressed air.	Brookville, Bed A.	72	84	69	47,574
Crawford.	Drift.	Non-gaseous			6						Electricity.	Upper Freeport, Bed E.	40	42	38	10,000
Cherry Run.	Drift.	Non-gaseous		6							Compressed air.	Upper Kittanning, Bed E.	42	42	42	16,000
Cutbush Hill.	Drift.	Non-gaseous	10								Compressed air.	Upper Kittanning, Bed B.	35	36	34	29,569
Duff.	Drift.	Non-gaseous	4	1		2					Electricity.	Upper Kittanning, Bed C.	35	36	34	8,000
Sherwin.	Shaft.	Non-gaseous	10	24							Compressed air.	Lower Kittanning, Bed B.	37	38	36	41,749
Eagle.	Drift.	Non-gaseous	4								Compressed air.	Upper Freeport, Bed E.	42	44	40	144,069
Farmount Nos. 1, 2 and 4.	Drift.	Non-gaseous	5								Compressed air.	Lower Freeport, Bed D.	51	60	48	30,135
Farmount No. 2.	Drift.	Non-gaseous	5								Compressed air.	Upper Kittanning, Bed C.	37	38	36	8,750
Granite.	Drift.	Non-gaseous	2			4		1			Electric & com. air.	Lower Kittanning, Bed E.	35	36	34	23,600
Indiana No. 1.	Drift.	Non-gaseous	6								Electricity.	Upper Freeport, Bed E.	44	48	40	23,600
Indiana No. 2.	Drift.	Non-gaseous	8								Compressed air.	Lower Freeport, Bed B.	36	36	36	179,578
Maryland.	Drift.	Non-gaseous	19								Compressed air.	Upper Freeport, Bed E.	41	42	40	48,402
Natasha Nos. 1 and 2.	Drift.	Non-gaseous	12	1							Compressed air.	Lower Kittanning, Bed E.	43	44	42	102,400
Monarch.	Drift.	Non-gaseous	3								Compressed air.	Upper Freeport, Bed E.	41	42	40	1,400
Oak Ridge Nos. 2 and 5.	Drift.	Non-gaseous	1								Compressed air.	Brookville, Bed A.	38	40	36	1,500
Oceanic.	Drift.	Non-gaseous	5								Compressed air.	Lower Kittanning, Bed B.	43	48	38	38,727
Roswell.	Drift.	Non-gaseous	3								Compressed air.	Lower Kittanning, Bed B.	42	48	36	15,000
River View.	Drift.	Non-gaseous	10								Compressed air.	Upper Freeport, Bed E.	78	78	78	37,468
Shago.	Drift.	Non-gaseous	19								Compressed air.	Lower Freeport, Bed D.	69	72	66	750,724
Harwick, formerly Cheswick.	Shaft.	Gaseous.	1	19							Compressed air.	Lower Freeport, Bed D.	69	72	66	750,724
Hamilton.	Drift.	Non-gaseous	2	20							Compressed air.	Lower Freeport, Bed D.	69	72	66	750,724
Soldier Nos. 1 and 2.	Drift.	Non-gaseous	2	20							Compressed air.	Lower Freeport, Bed D.	69	72	66	750,724

Maplewood,	Drift, ...	Non-gaseous	2	4	5	.....	.....	.....	.....	11	Compressed air,	Lower Freeport, Bed D,...	69	72	66	185,809
Rathmel,	Drift, ...	Non-gaseous	2	.....	7	.....	.....	.....	.....	9	Compressed air,	Lower Freeport, Bed D,...	64	78	50	100,100
Sherwood,	Drift, ...	Non-gaseous	.....	.....	2	.....	.....	.....	.....	2	Compressed air,	Lower Freeport, Bed D,...	64	70	50	24,453
Stood Run,	Drift, ...	Non-gaseous	.....	4	10	.....	.....	.....	.....	14	Compressed air,	Lower Freeport, Bed D,...	67	60	54	34,730
Virginia,	Drift, ...	Non-gaseous	.....	9	2	.....	.....	.....	.....	11	Compressed air,	Lower Freeport, Bed D,...	60	60	60	125,954
Totals, .....	.....	.....	20	131	132	1	1	.....	.....	320	.....	.....	.....	.....	.....	1,264,956

The names of persons granted mine foremen's certificates of competency of the second grade in the year 1902, are as follows:

Thomas Mathieson, Rees Davies, Seth B. Keefer, John B. Foringer, William Bowden, William Summers, James Rigby, John Hause, Mike McCullough, Wm. T. Magee and Angus L. Walker.

Description of New Mines Opened During the Year 1902 in this District.

Annandale No. 2 is a drift opening situated two and one-half miles from Annandale, Butler Co., and is operated by the Butts Cannel Coal Co. The company began to ship coal from this mine on the 24th of October, 1902. The coal seam is from 5.5 feet to 6 feet thick and is known as the Brookville and Clarion double bed. An air shaft has been sunk and a ventilating furnace built, and a second opening nearly completed. I measured about 7,500 cubic feet of air in circulation and found the mine in very fair condition.

Wildwood is a drift opening situated near Annandale and operated by W. K. Hamilton. The mine is opened on Brookville and Clarion double coal bed and it is about 4.5 feet thick. It is ventilated by a small furnace, which is not producing much air.

Bethel is a drift mine opening situated near Logansport, Armstrong Co., and operated by the Logansport Coal Co. The first coal was shipped in June. The Upper Freeport coal bed, three and one-fourth feet thick, is being mined here. The tippie (built of steel and equipped with a Phillips dump) is connected with the mine by a 300 foot inclined plane, and the mine cars are lowered to it by a cable which is run over two horizontal sheaves, with a break attachment. A ventilating furnace has been built, an air shaft sunk, and a second opening provided. I measured about 20,000 cubic feet of air in circulation in the mine which was well distributed throughout the workings. The mine is to be worked on the double entry plan. A mining machine plant has been installed, which consists of a 100 horse power tube boiler, an Ingersoll-Sergeant compressor and three Ingersoll mining machines.

Shenango Mine.—This shaft is 56 feet in depth, which has been sunk to the Brookville coal bed. The mine is situated on the Bessemer and Lake Erie R. R., about three miles from Grove City, Mercer Co., and is operated by the Shenango Coal Co. The first shipment of coal was made in May. A slope has been sunk to the coal seam for the purpose of a second opening. I measured 5,000 cubic feet of air in circulation, which was sufficient for the number of persons employed.

Beaver No. 2 mine is opened on the Dartington coal bed, which is three feet thick. This drift opening is situated near Wampum, Law-

rence Co., and is operated by the Beaver Coal and Coke Co. It is ventilated by a fan which is producing 12,000 cubic feet of air. The company began shipping coal about June 1st. The ventilation was good, but the drainage was poor.

Pollock mine is the old Underwood mine, situated near Parker, Clarion Co., but it is now owned by the "Pollock Lime and Coal Co."

Underwood mine is a drift opening, situated near Sligo, Clarion Co., and is operated by the Underwood Mining Co. The company began to ship coal during December. The Lower Kittanning seam is being mined. The ventilating furnace was not built at the time of my visit to the mine, hence the ventilation was not good.

Chicora Mine.—This drift opening is situated near Chicora, Butler Co., and is operated by the Chicora Coal and Coke Co. The mine is opened on the Upper Freeport Coal bed which is three feet eight inches thick. A ventilating furnace has been built, and an air shaft sunk. I measured 6,600 cubic feet of air in circulation. The ventilation and drainage were reasonably good.

Hill mine is situated on the West Pennsylvania Railroad in West moreland Co., and is operated by the Leechburg Coal and Coke Co. The coal bed being mined is the Upper Freeport and the company began to ship from this mine in March. A ventilating furnace has been built and an air shaft sunk and a second opening provided. This ventilating furnace was producing 10,000 cubic feet of air per minute.

Hedstrom or Dutch Hill mine is merely the old Brinker mine, but now operated by The Hedstrom Coal Mining Co. The mine was in very fair condition generally at my last visit.

The Claytonia mine is a small operation situated near Claytonia, Butler Co., and operated by the Erie Coal Mining Co. It was not in very good condition at the time of my visit to it.

Johnetta No. 2 is a shaft opening which was sunk to a depth of 102 feet to the Lower Kittanning coal bed, and is operated by the Pittsburgh and Buffalo Co., and situated at White Rock, Armstrong Co. The coal bed is 2' x 11" thick and is being mined by mining machines. At my visit the workings were still near the bottom of the shaft. The ventilating fan had not yet been installed, so the means for ventilation was by utilizing the compressed air from the mining machines.

The Mahoning mine has been re-opened and is now operated by Mark Packard. The ventilation and drainage were reasonably good.

The Kittanning Plate Glass mine is a drift opening, situated near Kittanning, Armstrong Co., and is operated by the Kittanning Plate Glass Co. All of the product of this mine is used at the company's glass works at Kittanning. The ventilation was fair, but the drainage poor.

The Trout Run mine is a drift opening situated about three miles from Reynoldsville, Jefferson Co., and is operated by the Jefferson-

Clearfield Coal and Iron Co. The Lower Freeport Coal bed is being worked, which is about 5 feet thick. Four parallel entries are being driven into the body of a 2,000 acre coal property, and double entries will be driven from these, and each division of work will be ventilated separately by a split of air. Several overcasts have been built to accomplish this purpose. Very large pillars of coal are being left between the entries, this being rendered necessary owing to much of the overlying strata being sand rock. Two fans of the Clark type are at present producing the ventilation of the mine, but the manager contemplates erecting a large sized Capell fan in the near future. The coal is being mined by Ingersoll mining machines and an Ingersoll compressor furnishes the power to operate them. An electric plant has been installed here also. Two eight ton electric motors are to be used to gather the coal to the sidings in the mine, and a fifteen ton motor will haul the coal cars from thence to the tippie outside. Six (100 H. P. each) boilers furnish the steam power for the different plants. For creating the draft for the boilers, a single iron stack with a small force fan at the bottom of it has been provided. For the expeditious handling of the coal at the tippie a Philips dump has been provided.

Oceanica Mine.—This is a drift opening situated near Hilliard, Butler Co., and operated by the Ellis, Blum Co. The company has but recently begun to ship coal.

The Butler mine is a drift opening, situated near Jamisonville, Butler Co., and operated by the Butler Coal and Coke Co. The company began to ship coal from this mine last November. The mine was in very fair condition generally.

Evans City mine is a shaft mine 112 feet deep, situated at Evans City, Butler Co., and operated by the Evans City Coal Co. The company began to ship coal from this mine in November. At the date of my visit I could not get down the shaft to examine the workings, owing to operations having been suspended for a week for the purpose of giving time to put in the cages and guides in the shaft.

The Fairmount Nos. 3, 5 and 8 are drift openings operated by the Fairmount Coal Co., and are situated in Armstrong county, but as they were only opened near the close of the year they were not visited by me.

The Brier Hill Block Coal Co.'s mine is a shaft opening forty-five feet deep. It has been sunk to the Sharon block coal. It will be a small operation. The mine is ventilated by exhaust steam, and is situated in Hickory township, Mercer county.

Description of Old Mines.

Mines Located Along the West Penn R. R.

There are twenty-four mines being operated along this railroad, and are producing coal from the Upper Freeport coal bed, except at the Avonmore mine, which is opened on the Pittsburg seam. Some of these mines are worked on the double entry system, but a majority of them are still worked on the single entry and air course plan. Eleven of these mines are ventilated by fans and thirteen of them by furnaces. All have a lawful volume of air in circulation in the workings, and the drainage at all of them, as a rule, is very good. The production of coal in this region was very much reduced during the year owing to there being a strike, lasting from three weeks at a few of the mines to as long as three and four months at others. To add to this, very inadequate shipping facilities were provided by the railroad company during the year. In fact some of the mines would be idle for days for want of cars.

Mines Situated Along the Buffalo and Allegheny Valley Railroad.

There are twenty-two mines situated along this railroad. The coals are being taken from the Pittsburg, Upper Freeport and the Lower Kittanning coal beds. This region was entirely free from labor troubles during the year and all of the mines would have been operated at full time had there been sufficient means of transportation provided by the railroad company. Therefore much broken time was experienced at the mines. At fifteen of them furnaces are used as the ventilating powers, and at seven fans are used for the same purpose. On the whole the mines here were all supplied with a lawful quantity of air, with possibly two exceptions, but at some of them the method used in conveying the air currents to the face of the workings was faulty. The drainage at nearly all of these mines was reasonably good.

Mines Located in the Reynoldsville Region and Along the Low Grade Division of the B. and A. V. R. R.

There are twenty-four mines situated in this division of the district and the coals being produced here are taken from the Upper Freeport, Lower Freeport and the Lower Kittanning coal beds, and all are drift openings, except the two Soldier Run mines. There has been no strike among the workingmen in this region during the year and the only idle time experienced has been due to the lack of railroad cars. Sixteen of these mines are ventilated by fans and seven

by furnaces, and one had no ventilating power. This latter mine has just been opened and the company has not had time to complete the ventilating arrangements.

All of these mines have a sufficient quantity of air, but the method of conducting it to the active workings in a few of them is defective. The drainage at a few of the mines was defective but taken as a whole they are in very good condition.

Mines Situated in Butler County, Etc.

There are twenty-four mines (which includes the Glenshaw mine of Allegheny county and the Cowansville mine of Armstrong county) in this part of the district. There has been no trouble between the employers and their employes in this region during the year, hence the mines have been operated reasonably well. Fourteen are ventilated by furnaces, eight by fans and at two of them the ventilating power has not yet been provided. Only at three of the mines did I find an insufficient quantity of air circulating at the inner workings. The coal beds being worked in this division are the Upper Freeport, Upper Kittanning and the Brookville-Clarion double seams. These coal seams are reached by twenty drift openings, three slopes and one shaft.

Mines in Beaver, Lawrence and Mercer Counties.

There are twenty-three mines in this portion of this district. They are opened on the Brookville, Upper Freeport and Upper Kittanning coal beds. There are thirteen drift openings, nine shafts and one slope in this region. Seventeen of these mines are ventilated by fans, five by furnaces and one by exhaust steam from the pumps. I found at four of them that the volume of air was not sufficient at the face of the workings and at seven the roads, at certain points in them, were wet and muddy. At the State Line and Sterling mines there was a strike among the workingmen which lasted four to five months during the year, but the mines as a whole have been operated very steadily.

TABLE 1—Showing names of operators, railroads, etc., and location of collieries in the Third Bituminous District for the year 1902.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Acme Coal Mining Co.	Clarion.	H. C. Burkett.	Greensburg.	J. P. Woodmansee.	Rimersburg.	Sligo Branch of L. G. Div. of B. & A. V.
Avondale Mining & Mfg. Co.	Clarion.	H. C. Burkett.	Greensburg.	J. P. Woodmansee.	Rimersburg.	L. G. Div. of B. & A. V.
Avondale.						
Joseph G. Beale & Co.	Armstrong.	Joseph G. Beale.	Leechburg.	E. H. Beale.	Leechburg.	Buffalo and Allegheny Valley.
Avonmore Coal and Coke Co.	Armstrong.			L. W. Hicks.	Leechburg.	West Penn.
Avonmore.						
Allegheny Coal & Coke Co.	Allegheny.			N. S. Hicks.	Leechburg.	West Penn.
Avonmore.						
Anderson Run Coal Co.	Jefferson.	F. L. Verstine.	Brookville.	D. F. Hibbard.	Brookville.	L. G. Div. of B. & A. V.
Anderson Run.						
Butts Cannon Coal Co.	Beaver.			George Gould.	Boyer.	Pitts. Ft. Wayne and Chicago.
Butts.	Butler.			George Gould.	Boyer.	Hilliard Branch of Bessemer & Lake Erie.
Annandale No. 1.	Butler.			George Gould.	Boyer.	Hilliard Branch of Bessemer & Lake Erie.
Annandale No. 2.						West Penn.
Joseph G. Beale & Co.	Armstrong.	Joseph G. Beale.	Leechburg.	Harry W. Beale.	Leechburg.	West Penn.
Beale.						
Brackenridge Coal Co.	Allegheny.	N. S. Hicks.	Leechburg.	N. S. Hicks.	Leechburg.	West Penn.
Brackenridge.						
Logansport Coal Co.	Armstrong.	Robert C. McLean.	Logansport.	Robert C. McLean.	Logansport.	Buffalo and Allegheny Valley.
Beale, Pogueck & Kerr, Inc.				Geo. Snedden.	Rathmel.	Falls Creek and Reynoldsville Branch of B. R. and P.
Bloomington No. 9.	Jefferson.	Alex. Lunsford.	Glen Richey.	H. K. Hartsuff, Jr.	Wampum.	Erie and Pittsburgh.
Beaver Coal and Coke Co.	Lawrence.					
Beaver Nos. 1 and 2.						

TABLE I—Continued.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Sharon Coal and Limestone Co. Buhl No. 1.	Mercer.	T. B. DeArmit.	Grove City.	John Marshall.	R. F. D. No. 2. Volant.	Pa. Branch of W. N. Y. & Pa.
Buhl No. 2.	Lawrence.	T. B. DeArmit.	Grove City.	C. H. Oakes.	R. F. D. No. 2. Volant.	Pa. Branch of W. N. Y. & Pa.
Buhl No. 3.	Butler.	T. B. DeArmit.	Grove City.	M. W. Jenkins.	Slippery Rock.	Pa. Branch of W. N. Y. & Pa.
Buhl No. 4.	Butler.	T. B. DeArmit.	Grove City.	M. W. Jenkins.	Slippery Rock.	Pa. Branch of W. N. Y. & Pa.
Keystone Mining Co. Brady's Bend.	Armstrong.	George E. Henry.	East Brady.	John Henry.	East Brady.	Buffalo and Allegheny Valley.
Keystone.	Clarion.	George E. Henry.	East Brady.	John Henry.	East Brady.	Sligo Branch of B. & A. V.
Lewis Coal Co. Blackstone.	Westmoreland.	Alfred Hicks.	Leechburg.	N. S. Hicks.	Leechburg.	West Penn.
Bugdad Coal and Coke Co. Bugdad.	Armstrong.	Alfred Hicks.	Leechburg.	N. S. Hicks.	Leechburg.	West Penn.
Braeburn Steel Co. Braeburn.	Westmoreland.	Wm. Beane.	Braeburn.	Wm. Beane.	Braeburn.	Buffalo and Allegheny Valley.
Butler Coal and Coke Co. Butler.	Butler.	M. R. Shaner.	Butler.	J. P. Fleegeer.	R. F. D. No. 1. Butler.	Bessemer and Lake Erie.
Carrier Brothers. Carrier.	Jefferson.			C. E. Carrier.	Summersville.	L. G. Div. of B. & A. V.
Erie Coal Mining Co. Claytonia.	Butler.			Mason Mizener.	Hillard.	Bessemer and Lake Erie.
Pittsburg Plate Glass Co. Creighton.	Allegheny.	J. K. Johnston.	Charleroi.	Chas. O. Emerson.	Creighton.	West Penn.
Cowansville Mining Co. Cowansville.	Armstrong.	H. M. Gibb.	Cowansville.	H. M. Gibb.	Cowansville.	B. R. and P.
Chicora Coal and Coke Co. Chicora.	Butler.			P. A. Jordan.	Chicora.	P. and W. Branch of B. & O.
Cherry Run Coal Mining Co. Cherry Run.	Clarion.	Chas. Andrews.	30 E. Church st. Edinra, N. Y.	E. N. Miller.	Huey.	Sligo Branch of B. and A. V.

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TABLE I—Continued.

Names of Operators and Collieries.	County	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Grove Coal Co. Enterprise.	Mercer.	D. W. Morris.	Cleveland, O.	D. D. Morris.	Grove City.	Bessemer and Lake Erie.
Gilpin Coal Co.	Armstrong.			L. W. Hicks.	Leechburg.	West Penn.
Pittsburg Coal Co. Cheshaw.	Allegheny.	G. W. Schlueter- berg	Pittsburg.			P. & W. Branch of B. & O.
F. A. Mizener. Grant.	Butler.			Mason Mizener, Alex. Skinner.	Hilliard.	Bessemer and Lake Erie.
American Sheet Steel Co. Kickapack.	Butler.				Hilliard.	Hilliard Branch of B. & L. E.
Kittanning Plate Glass Co. Kittanning.	Armstrong.			Oscar Lendquest.	Leechburg.	West Penn.
Turner, Coal, Coke and Min- ing Co. Keystone Nos. 1 and 2.	Armstrong.			J. T. Keller.	Kittanning.	Buffalo and Allegheny Valley.
Kerr Coal Co. Kerr No. 1. Kerr No. 8.	Butler.	J. L. Turner.	Ferris.	J. L. Turner.	Ferris.	Hilliard Branch of B. & L. E.
Lanesco Coal Co. Lanesco.	Armstrong.	R. A. Stiem.	Kittanning.	R. A. Stiem.	Kittanning.	West Penn.
Ben Franklin Coal Co. Metzall.	Butler.	R. A. Stiem.	Kittanning.	R. A. Stiem.	Kittanning.	West Penn.
Monterey Coal Co. Monterey.	Westmoreland.	J. Howard Patton.	Greensburg.	J. Howard Patton.	Greensburg.	Buffalo and Allegheny Valley.
	Westmoreland.	R. A. Stiem.	Kittanning.	R. A. Stiem.	Kittanning.	Buffalo and Allegheny Valley.
	Charlon.	Armed Hicks.	Pittsburg.	A. J. Walton.	West Monterey.	Buffalo and Allegheny Valley.
Pittsburg Plate Glass Co. Mosgrove.	Armstrong.	James H. Johnston.	Charleroi.	Wm. L. Affolder.	Mosgrove.	Buffalo and Allegheny Valley.
Mark Patent Mahoning.	Armstrong.			E. Marshall.	Mahoning.	Buffalo and Allegheny Valley.

TABLE I—Continued.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Ellis, Blum Co. Oceanica,	Butler, .....	.....	.....	Geo. W. Bird,	Hilliard,	Hilliard Branch of B. & L. E.
Pine Run Coal and Coke Co. Pine Run Nos. 1 and 2,	Westmoreland, .....	.....	.....	L. W. Hicks,	Loechburg,	West Penn.
N. Y. & C. Gas Coal Co. Plum Creek,	Allegheny,	Geo. Z. Hosack,	820 Penn ave., Pittsburg,	Hugh Denning, ..	Unity,	Plum Creek Bch. of B. & A. V.
Sandy Creek,	Allegheny,	Geo. Z. Hosack, ..	.....	Wm. Fisher,	White Ash,	Sandy Creek Bch. of B. & A. V.
The Pollock Coal & Lime Co. Pollock,	Clarion, .....	.....	.....	H. W. Slaughten- hous,	Pollock,	Buffalo and Allegheny Valley.
Royle Coal Co.,	Butler, .....	.....	.....	R. E. Royle,	Hilliard,	Hilliard Branch of B. & L. E.
Geo. E. Tenet, Rock Point,	Lawrence, .....	.....	.....	Wm. Brown,	Wampum,	P. & W. Branch of B. & O.
Riverview Coal Mining Co. Riverview,	Armstrong,	W. J. Dunham, ..	Buffalo, N. Y., ..	.....	.....	Buffalo and Allegheny Valley.
Rouncing Run Coal & Coke Co. Rouncing Run,	Westmoreland, .....	.....	.....	John McKeever, ..	Apollo,	West Penn.
Geo. G. Stage, Stage,	Butler, .....	.....	.....	Geo. G. Stage,	Greenville,	Pessemmer and Lake Erie.
Mercer Iron & Coal Co. Stoneboro No. 3,	Mercer,	Robt. P. Cann, ...	Stoneboro,	B. F. Esgar,	Stoneboro,	Branch of L. S. & M. S.
Sterling Mining Co. Sterling,	Beaver,	John Hileman, ...	Cleveland, O., ...	Jacob Ashman, ..	East Palestine, O.	Pitts., Marion & Chicago.
Standard Coal Mining Co. Standard,	Butler, .....	.....	.....	Harry Hamilton, ..	Hilliard,	Hilliard Branch of B. & L. E.
Standard Coal Mining Co. Standard,	Clarion,	T. S. Lowther,	Rimersburg,	J. D. Lowther, ...	Rimersburg,	Sligo Branch of B. & A. V.
Sterling Coal Co. Sterling,	Clarion,	Geo. E. Henry, ...	East Brady, ...	Peter Henry,	Lawsonham,	Sligo Branch of B. & A. V.

Sligo Coal and Mining Co. Sligo,	Clarion, .....	.....	.....	H. F. Miller,	Huey,	Sligo Branch of B. & A. V.
State Line Coal Co. State Line,	Beaver,	W. J. Mullins, ...	Wooster, O., ...	Hugh Laughlin, ...	East Palestine, O.	Pitts., Ft. Wayne & Chicago.
Shenango Coal Co. Shenango,	Mercer,	Edwin Cook,	Grove City,	Edwin Cook,	Grove City,	Bessemer and Lake Erie.
Underwood Mining Co. Underwood,	Clarion, .....	.....	.....	H. A. Underwood, ...	Sligo,	Sligo Branch of B. & A. V.
Thompson Run Coal Co. Thompson Run,	Beaver, .....	.....	.....	F. H. Douthitt, ...	Kimberly,	Ellwood Branch of P. & L. E.
Valley Coal Co. Valley,	Westmoreland,	Jos. G. Beale,	Leechburg,	Harry W. Beale, ...	Leechburg,	West Penn.
West Penn Mining Co. West Penn,	Westmoreland, .....	.....	.....	L. W. Hicks,	Leechburg,	West Penn.
The Wahvills Coal Co. Wahvills Nos. 1 and 2,	Butler, .....	.....	.....	A. R. Wahl,	Evans City,	P., R. & P.
Widwood. Wm. K. Hamilton,	Butler, .....	.....	.....	Wm. K. Hamilton	Boyer,	Holland Branch of B. & L. E.
Trier Hill Block Coal Co. Trier Hill,	Mercer, .....	.....	.....	Eugene Bailey, ...	Sharpsville,	Sharpsville Branch of B. & O.

Brackenridge Coal Co.	Allegheny,	40,520	.....	40,520	.....	260	48	.....	678	4
Beaver Coal and Coke Co.	Lawrence,	64,728	2,237	.....	.....	280	89	.....	.....	10
Beaver No. 1,	Lawrence,	25,256	.....	.....	.....	153	105	.....	.....	5
Beaver No. 2, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15
Totals, .....	.....	87,994	2,237	.....	.....	215	194	.....	.....	.....
Sharon Coal and Limestone Co.	Mercer,	15,000	3,200	475	.....	160	52	1	100	5
Buhl No. 1,	Lawrence,	25,000	4,000	475	.....	160	80	.....	1,000	5
Buhl No. 2,	Butler,	15,000	.....	.....	.....	20	63	.....	20	5
Buhl No. 3,	Butler, .....	.....	.....	.....	.....	20	71	.....	.....	5
Buhl No. 4, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals, .....	.....	51,000	7,200	950	.....	90	268	1	229	21
Braeburn Steel Co.	Westmoreland, .....	.....	19,680	.....	.....	309	26	.....	.....	2
Brady's Bend,	Armstrong,	61,630	500	.....	.....	226	102	1	.....	8
Keystone,	Clarion,	32,846	.....	.....	.....	206	27	.....	.....	1
Totals, .....	.....	93,576	500	.....	.....	216	129	1	.....	9
Lewis Coal Co.	Westmoreland,	52,672	200	100	.....	237	87	.....	560	6
Bagdad Coal and Coke Co.	Armstrong,	35,123	150	.....	.....	216	57	.....	350	4
Bagdad, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Belvidere,	Armstrong,	15,288	110	.....	.....	163	46	1	275	5
Boyle, Pavaock & Kerr, Inc.	Jefferson,	52,224	1,070	58	.....	174	74	.....	462	25
Bloomington No. 3,	Jefferson,	43,600	1,500	120	.....	251	99	1	500	10
Carrier, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Carrier Brothers,	Butler,	10,488	25	36	.....	260	15	.....	.....	2
Erle Coal Mining Co.	Allegheny,	75,493	50	1,520	.....	273	81	1	.....	6
Pittsburg Plate Glass Co.	Armstrong,	52,184	150	500	.....	247	60	.....	840	3
Creighton, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cowansville Mining Co.	Butler,	16,003	.....	1,422	.....	359	36	.....	.....	2
Cowansville, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Chicora Coal and Coke Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Chicora, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

*Totals in this column are averages.

TABLE II—Continued.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employes—tons.	Total production of coal in tons.	Total production of coke in tons.	Number of coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Cherry Run Coal Mining Co.	Clarion,	27,591	2,660	2,000	31,591			293	59			125	75	2
Cherry Run,	Clarion,													
Clayton,	W. F. Clayton,		70	10,479	10,529			301	29			30		3
Cornell,	Cornell Coal Co.	51,101	2,040	27,700	81,310			24	144			660		7
Carver,	Carver Coal Co.	48,024	4,805	33	53,132			271	74			225		6
Crack Dell,	Hamilton Coal Mining Co.	45,410	343	115	45,858			240	63			625		5
Cardish Run,	Cardish Run Coal Co.	26,380	100	75	26,755			259	46			100	50	6
Harwick,	The Allegheny Coal Co.	33,318	3,600	550	37,468			116	128	1	1			8
Westernman, Filler & Co.	Mercer,	117,057	4,300	1,100	122,757			278	186	1		983		8
Diamond No. 1,	Mercer,	86,593	2,700	1,475	91,068			256.6	132			700		5
Diamond No. 2,	Mercer,	203,950	7,000	2,875	213,825			277.3	318	1		1,685		13
Totals,														
The Holstrom Coal Mining Co.	Clarion,	28,879	685	5	29,569			125	103		1	54	50	7
Dutch Hill,														
Diamond,	James W. Ganoe,	27,537		112	27,649			174	52					3

Darlington Brick and Mining Co.	Beaver.....	6,800	200	7,000	273	16	.....	.....	.....	2
Darlington.....	Beaver.....	.....	3,927	3,927	307	10	.....	.....	.....	1
Davidson, Addison Davidson.	Beaver.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Enterprise, Eagle Coal Co., Inc.	Butler.....	11,620	9,700	22,320	288	30	.....	.....	365	300
Enterprise, Sherwin.	Butler.....	21,566	7,960	29,526	278	61	.....	.....	.....	3
Totals, P. D. Sherwin.	.....	34,126	17,660	51,786	283	91	.....	.....	303	2,300
Eagle, P. D. Sherwin.	Clarion.....	41,498	50	44,148	200	84	.....	1	500	100
Excelsior No. 4, Wampum Run Coal Co.	Lawrence,	43,920	300	44,220	287	94	.....	.....	500	200
Enterprise, Grove Coal Co.	Mercer.....	60,833	682	68,115	270	112	.....	.....	.....	.....
Fairmount Coal Co.	Armstrong,	170,277	199	170,476	280	254	.....	1	2,200	21
Fairmount No. 1,	Armstrong,	58,806	.....	60,944	.....	128	.....	.....	800	10
Fairmount No. 2,	Armstrong,	89,006	.....	89,084	282.5	172	.....	.....	1,000	19
Fairmount No. 4,	Armstrong,	313,179	109	320,364	280.3	551	.....	1	4,000	50
Totals, Evans City Coal Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Evans City Coal Co.	Butler,	1,000	150	1,100	40	24	.....	.....	.....	1
Gilpin, Gilpin Coal Co.	Armstrong,	57,050	.....	57,050	223	80	.....	.....	.....	5
Glenshaw, Pittsburg Coal Co.	Allegheny,	67,241	549	68,397	255	98	.....	.....	792	450
Grant, F. A. Mizer.	Butler,	20,018	102	40,027	271	60	.....	2	1,200	1
Mizer, Butler,	Butler,	70,205	607	70,907	270	83	.....	1	650	3
Totals, Leechburg Coal and Coke Co.	.....	149,252	709	110,932	275	152	.....	2	650	10
Hill, Leechburg Coal and Coke Co.	Westmoreland,	21,765	150	21,915	304	30	.....	.....	250	3
Riverview,	Westmoreland,	27,388	200	28,188	179	63	.....	.....	300	5
Totals, McFarbridge Brothers.	.....	49,753	350	50,103	211.5	102	.....	.....	550	8
Hites, McFarbridge Brothers.	Allegheny,	77,450	2,323	81,802	195	127	.....	1	975	50
Hill, Hill Coal Co. Ltd.	Mercer.....	57,800	1,000	59,000	241.5	97	.....	.....	100	100
Hill, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5

*Totals in this column are averages.

TABLE II—Continued.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Total production of coke in tons.	Number of coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Frank Williams & Co.	Clarion,	16,470	.....	.....	16,470	.....	.....	181.5	38	.....	.....	.....	.....	.....
Hellville,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Haddon Coal Co.	Armstrong,	36,985	175	.....	37,140	.....	.....	237	57	.....	.....	375	.....	5
Hickory Coal Co., Limited.	Mercer,	27,108	750	.....	28,004	.....	.....	220.5	59	.....	.....	.....	.....	5
Jefferson-Clearfield Coal and Iron Co.	Jefferson,	1,072,449	.....	.....	1,072,449	178,048	393	266	987	.....	5	.....	.....	65
Hamilton,	Jefferson,	.....	.....	.....	.....	.....	.....	266	.....	.....	4	.....	.....	.....
Soldier Run No. 1,	Jefferson,	104,000	.....	.....	104,000	.....	.....	251.5	163	.....	.....	.....	.....	9
Soldier Run No. 2,	Jefferson,	143,000	.....	.....	143,000	.....	.....	247.5	201	1	3	.....	.....	10
Maplewood,	Jefferson,	34,933	.....	.....	34,933	.....	.....	248	33	.....	.....	.....	.....	2
Rathmel,	Jefferson,	49,615	.....	.....	49,615	.....	.....	248	212	1	.....	.....	.....	9
Sherwood,	Jefferson,	179,365	.....	.....	179,365	.....	.....	248	.....	.....	.....	.....	.....	.....
Trout Run,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Virginia,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals,	.....	1,673,932	.....	.....	1,673,932	178,048	393	232.5	1,912	2	14	.....	.....	95
Pittsburg and Buffalo Co.	Armstrong,	97,080	2,900	17,640	117,600	8,850	25	294	213	1	.....	588	2,000	5
Johanna No. 1,	Armstrong,	3,700	.....	.....	3,700	.....	.....	74	58	.....	.....	.....	1,000	.....
Johanna No. 2,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals,	.....	100,780	2,900	17,640	121,300	8,850	.....	184	271	1	.....	588	3,000	5
"K,"	Mercer,	36,215	730	.....	36,935	.....	.....	289	66	.....	.....	.....	.....	6
Pardoe Coal Co.	Mercer,	99,880	720	700	101,300	.....	.....	269	122	1	1	.....	.....	13
Totals,	.....	136,095	1,440	700	138,235	.....	.....	269	188	1	1	.....	.....	19

American Sheet Steel Co.	Armstrong, . . .	23,773	23,773	285	21	230	2
Kirkpatrick, . . .	Armstrong, . . .	10,078	10,182	268	10	90	1
Kittanning Plate Glass Co.	Butler, . . .	60,200	60,815	258.4	81	600	8
Kittanning, . . .	Butler, . . .	9,095	9,305	254.6	10	40	1
Turner Coal, Coke and Mining Co.	Totals, . . .	69,295	70,120	256.5	97	640	9
Keystone No. 1, . . .	Kerr Coal Co.	50	8,500	260	13	600	1
Keystone No. 2, . . .	Kerr No. 1, . . .	150	58,200	269	81	100	6
Totals, . . .	Kerr No. 2, . . .	200	66,700	264.5	94	600	7
Lucas Coal Co.	Westmoreland, . . .	18,818	18,909	262	53	4	4
Ben Franklin Coal Co.	Westmoreland, . . .	30,000	30,060	252	38	1	3
Monterey Coal Co.	Clarion, . . .	28,837	28,837	259	43	72	6
Pittsburg Plate Glass Co.	Armstrong, . . .	86,750	87,823	263.9	134	809	7
Mesgrove, . . .	Armstrong, . . .	15,129	15,129	268	32	4	4
Mahoning, . . .	Butler, . . .	17,298	18,206	239.3	34	2	2
Nellie Coal Co.	Allegheny, . . .	310	310	310	171	843	10
Penn'a Salt Mfg. Co.	Allegheny, . . .	146	146	146	47	4	4
Natrona No. 1, . . .	Totals, . . .	2,065	176,397	1,576	218	843	14
Natrona No. 2, . . .	C. P. McCafferty, . . .	47,692	48,062	206	81	1	8
Totals, . . .	Oak Ridge Mining Co.	200,493	212,367	242.8	278	955	22
Monarch, . . .	Oak Ridge Nos. 3 and 4, . . .	1,500	1,500	54	25	2	2
Oak Ridge Nos. 3 and 4, . . .	Ellis, Blum Co.	70	70	257	74	1	8
Oswanite, . . .	Pine Run Coal and Coke Co.	47,241	47,241	47,241	74	1	8
Pine Run Coal and Coke Co.	Pine Run Nos. 1 and 2, . . .	47,241	47,241	47,241	74	1	8

*Totals in this column are averages.

TABLE II—Continued.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employes—tons.	Total production of coal in tons.	Number of coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
The Pollock Coal and Lime Co. Pollock,	Clarion,	4,020	.....	25	4,045	.....	186	35	.....	.....	5	50	2
N. Y. & C. Gas Coal Co. Plum Creek,	Allegheny,	230,438	1,792	1,439	232,667	.....	275.5	278	.....	.....	.....	.....	14
Sandy Creek,	Allegheny,	190,912	1,426	1,430	193,777	.....	276	254	.....	3	.....	.....	34
Totals, .....	.....	421,350	3,218	2,878	427,444	.....	275.7	532	2	3	.....	.....	48
Royle Coal Co. Ryle,	Butler,	16,500	25	100	16,625	.....	226	50	.....	.....	200	500	4
George E. Tenor. Rock Point,	Lawrence,	27,885	30	.....	27,915	.....	260	54	.....	.....	20	10	6
Riverview Coal and Mining Co., Ltd. Riverview,	Armstrong,	67,667	1,924	.....	69,291	.....	169.6	127	.....	.....	300	.....	13
Roaring Run Coal and Coke Co. Roaring Run,	Westmoreland,	22,736	.....	.....	22,736	.....	235	39	.....	.....	.....	.....	4
George G. Stage. Stage,	Butler,	18,151	.....	.....	18,151	.....	213.5	39	.....	.....	15	2,500	3
Merger Iron and Coal Co. St nebore No. 3,	Merger,	95,629	1,799	754	97,622	.....	288	152	.....	.....	422	85	16
Sterling Mining Co. Sterling,	Beaver,	12,506	400	.....	12,906	.....	158	37	.....	.....	130	.....	2
Standard Coal Mining Co. Standard,	Butler,	31,760	.....	240	32,000	.....	265	60	.....	.....	270	300	6

The Hedstrom Coal Mining Co.,	Clarion,	2	130	130	1	3	147	3	250	100	1
James W. Ganoce,	Clarion,										
Darlington Brick and Mining Co.,	Beaver,										
Addison Davidson,	Beaver,										
F. D. Sherwin,	Butler,	3	100	130	1	1	10	1	75	50	1
Ridge Coal Co., Inc.,	Clarion,						15		900	600	
Wampum Run Coal Co.,	Lawrence,						50				
Graves Coal Co.,	Mercer,	3	150	150		1	282	2			
Farmount Coal Co.,	Armstrong,	6	710	710		7					
Edinburg Coal Co.,	Butler,	1	100	100		1	35	1	400	300	5
Gillis Coal Co.,	Armstrong,										
Pittsburg Coal Co.,	Allegheny,	2	100	100		2	50	2	913	400	
F. A. Mizner,	Butler,	1	150	150		1	15	1	200	4	1
Leedsburg Coal and Coke Co.,	Westmoreland,	1	100	100		1	50				
McFarquise Brothers,	Allegheny,	2	50	140		3	115	2	250	250	1
Hill Coal Co., Limited,	Mercer,	2	85	85		4	75	1	1,000	700	
Frank Williams & Co.,	Clarion,										
Haul-on Coal Co., Limited,	Armstrong,										
Hickory Coal Co.,	Mercer,	1	150	150		2	140	2	600	600	
Jefferson-Clearfield Coal and Iron Co.,	Jefferson,	30	3,750	3,750		7	930				
Pittsburg and Buffalo Co.,	Armstrong,	5	1,500	1,500		2	670	4	500	340	1
Pardoe Coal Co.,	Mercer,	2	80	80	1	3	90				
American Sheet Steel Co.,	Armstrong,										
Attaining Plate Glass Co.,	Armstrong,										
Turner Coal, Coke and Mining Co.,	Butler,	1	20	20		1	20	2	180	180	
Kaiser Coal Co.,	Armstrong,										
Lansco Coal Co.,	Armstrong & Butler,										
Ben Franklin Coal Co.,	Westmoreland,	1	35	35							
Montgomery Coal Co.,	Clarion,										
Pittsburg Plate Glass Co.,	Armstrong,	2	300	300	1	2	175	3			1
Mark Packard,	Armstrong,										
Nellie Coal Co.,	Butler,	1	60	60		1	50	1	330	330	
Penn'a Salt Manufacturing Co.,	Allegheny,	4	300	300		5	275				1
C. F. McCafferty,	Clarion,	2	150	125	1	2	225	2	100	100	1
Oak Ridge Mining Co.,	Armstrong,	6	245	245							
Ellis Run Co.,	Butler,	1	100	100		1	50				1
Pine Run Coal and Lime Co.,	Westmoreland,	1	80	80				2	100	100	
Pho Fallack Coal and Lime Co.,	Clarion,										
K. V. & Sons Coal Co.,	Allegheny,	1	20	20	3	3	140				
George E. Tappin,	Butler,										1
Riverside Coal and Mining Co., Ltd.,	Lavaca,										
Roaring Run Coal and Coke Co.,	Armstrong,	2	70	50	3	100		3	500	400	2
George G. Stage,	Westmoreland,										
Mercer Iron and Coal Co.,	Butler,										
Sterling Mining Co.,	Mercer,	3	130	130		4	90	2	1,100	475	
Standard Coal Mining Co.,	Beaver,	1	80	80		1	40	2	75	50	
Campbell Lawther Coal Co.,	Butler,					1	10	1	80	80	
Sterling Coal Co.,	Clarion,										
Sligo Coal Mining Co.,	Clarion,	2	120	120		1	25				1
State Line Coal Co.,	Beaver,	3	150	150	1	4	300				
Shenango Coal Co.,	Mercer,	1	150	150		2	300				

TABLE II—Continued.

Names of Operators and Collieries.	County.	Number of Boilers.			Total horse power.			Locomotives.			Number steam engines of all classes.			Total horse power.	Number pumps delivering water to surface.	Capacity in gallons per minute.	Quantity delivered to surface per minute—gallons.	Number electric dynamos.	Number air compressors.
		Cylindrical.	Tubular.	Horse power.	Horse power.	Horse power.	Steam.	Air.	Electric.										
Thompson Run Coal Co.,	Beaver,																		
Underwood Mining Co.,	Clarion,																		
Valley Coal Co.,	Westmoreland,	1		50			50												
West Penn Mining Co.,	Westmoreland,																		
The Wahiville Coal Co.,	Butler,		1	50			50												
Wm. K. Hamilton,	Butler,																		
Erler Hill Block Coal Co.,	Merret,		1	50			50												
Butler Coal and Coke Co.,	Butler,	2		100			150												
Grand totals.		35	121	22,000	12,165	14,365		9		12	96	6,670	60	15,723	11,524	1			40

TABLE III.—Showing the number of each class of employees at each colliery in the Third Bituminous District during the year 1902.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.										Grand total, inside and outside.
		Mine foremen.	Assistant mine foremen.	Fire bosses.	Miners.	Machine runners.	Machine loaders.	Machine scrapers.	Drivers and runners.	Door-boys and helpers.	Company men.	All other employees.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and firemen.	Coke employees.	Hook-keepers and clerks.	All other employees.	Total outside.		
Acme Coal Mining Co.	Clarion	1	1	1	46	4	29	4	7	1	3	1	95	1	1	2	1	1	3	8	103	
Avondale Mining & Mfg. Co.	Clarion	1	1	1	32	1	1	1	3	1	1	1	36	1	1	1	1	1	3	5	41	
Avondale,		1	1	1	65	1	1	1	4	1	1	1	71	1	1	1	1	1	3	7	78	
Aladdin,	Armstrong	1	1	1	65	1	1	1	8	1	2	1	77	1	1	1	1	1	7	11	88	
Avondale Coal and Coke Co.	Armstrong	1	1	1	65	1	1	1	8	1	2	1	77	1	1	1	1	1	7	11	88	
Avondale,		1	1	1	65	1	1	1	8	1	2	1	77	1	1	1	1	1	7	11	88	
Allegheny Coal and Coke Co.	Allegheny	1	1	1	28	1	1	1	3	1	5	1	37	1	1	1	1	1	3	3	40	
Allegheny,		1	1	1	28	1	1	1	3	1	5	1	37	1	1	1	1	1	3	3	40	
Anderson Run Coal Co.	Jefferson	1	1	1	50	1	1	1	2	1	3	1	56	1	1	1	2	3	13	19	75	
Anderson Run,		1	1	1	50	1	1	1	2	1	3	1	56	1	1	1	2	3	13	19	75	
Burtis Canby Coal Co.	Butler	1	1	1	70	1	1	1	7	1	1	1	76	1	1	1	1	1	3	3	80	
Annandale No. 1,	Butler	1	1	1	30	1	1	1	1	1	1	1	34	1	1	1	1	1	4	4	38	
Annandale No. 2,	Butler	1	1	1	40	1	1	1	1	1	1	1	44	1	1	1	1	1	4	4	48	
Butts,		1	1	1	140	1	1	1	8	1	3	1	154	1	1	2	1	1	11	15	169	
Totals,		5	5	5	140	5	5	5	8	5	3	5	154	5	5	5	5	5	11	15	169	

Keystone,	Clarion	1	50					1	1	23	1	1	2	4	27	
Totals,		2	.....	60	2	35	3	6	1	3	.....	.....	113	2	.....	1	1	16	129
Lewis Coal Co.																					
Blackstone,	Westmoreland,	1	69					6	1	2	79	1	1	5	8	87	
Bagdad Coal and Coke Co.																					
Bagdad,	Armstrong,	1	46				4	1	52	1	1	3	5	57	
Logansport Coal Co.																					
Bethel,	Armstrong,	1	26				4	2	33	1	2	1	8	13	46	
Peele, Peacock & Kerr, Inc.																					
Bloomfield No. 3,	Jefferson,	1	40	3	9	3	4	3	3	66	1	1	1	4	8	74	
Carrier Brothers,																					
Carrier,	Jefferson,	1	8	50	8	8	2	78	1	1	3	4	2	10	99	
Erie Coal Mining Co.																					
Maytonia,	Butler,	1	10				2	1	14	1	1	15	
Pittsburg Plate Glass Co.																					
C'reighton,	Allegheny,	1	5	2	45	2	6	3	3	68	1	1	2	1	2	6	13	81
Gowansville Mining Co.																					
Chicora Coal and Coke Co.	Armstrong,	1	41				3	1	8	54	1	2	1	2	6	60
Chicora,																					
Cherry Run Coal Mining Co.	Butler,	1	26				2	1	1	31	1	1	1	2	5	36
Cherry Hill,																					
W. F. Clayton.	Clarion,	1	15	3	25	3	3	2	1	83	1	1	1	2	6	59	
Beaver,		1	19				1	4	25	1	3	4	29	
Allegheny,		1	110				8	3	5	138	1	1	1	4	2	16	144
Mercer,		1	47				6	4	5	63	1	4	1	11	71
Hamilton Coal Mining Co.																					
Crag Well,	Westmoreland,	1	30	2	8	4	3	2	1	1	53	1	1	2	1	10	63
Cutfish Run Coal Co.																					
Cathish Run,	Clarion,	1	33				5	40	1	1	1	3	6	46
The Allegheny Coal Co.																					
Harwick,	Allegheny,	1	1	10	50	10	6	2	7	12	99	1	7	4	1	16	29	128

TABLE III—Continued.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.										
		Mine foremen.	Assistant mine foremen.	Fire bosses.	Miners.	Machine runners.	Machine loaders.	Machine scrapers.	Drivers and runners.	Team-boys and helpers.	Company men.	All other employes.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	Cable employes.	Track-keepers and clerks.	All other employes.	Total outside.	
Westerman, Filer & Co.																						
Diamond No. 1.	Merced.	1	140	12	2	6	5	106	1	1	2	4	1	11	20
Diamond No. 2.	Merced.	1	.....	.....	100	.....	.....	9	12	12	3	3	124	.....	.....	.....	3	.....	.....	7	12
Totals.		2	.....	.....	240	.....	.....	21	4	11	8	286	1	.....	3	7	.....	.....	3	18	32
The Hedstrom Coal Mining Co.																						
Butch Hill.	Charlton.	1	.....	.....	.....	8	55	8	6	3	3	.....	84	1	.....	4	3	.....	1	10	19
James W. Gamoe.																						
Diamond.	Charlton.	1	.....	.....	40	.....	.....	3	.....	1	.....	45	.....	.....	1	.....	.....	.....	1	5	7
Barlington Brick and Mining Co.																						
Barlington.	Beaver.	1	.....	.....	12	.....	.....	1	.....	.....	.....	14	1	.....	.....	.....	.....	.....	.....	1	2
Addison Davidson.																						
Davidson.	Beaver.	1	.....	.....	7	.....	.....	1	.....	.....	.....	9	1	.....	.....	.....	.....	.....	.....	.....	1
P. D. Sherwin.																						
Enterprise.		1	.....	.....	20	.....	.....	2	.....	1	.....	24	.....	.....	1	1	.....	.....	1	3	6
Sherwin.	Butler.	1	.....	.....	28	2	18	2	3	.....	1	55	.....	.....	1	1	.....	.....	1	3	6
T. Tols.		2	.....	.....	48	2	18	2	5	.....	1	49	.....	.....	2	2	.....	.....	2	6	12
Eagle Coal Co., Inc.																						
Eagle.	Charlton.	1	.....	.....	6	5	44	5	5	1	2	1	7	1	1	1	2	.....	1	8	14

TABLE III—Continued.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.										Grand total, inside and outside.
		Mine foremen.	Assistant mine foremen.	Pit bosses.	Miners.	Machine runners.	Machine loaders.	Machine scrapers.	Drivers and runners.	Door-boys and helpers.	Company men.	All other employees.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and firemen.	Engineers and firemen.	Coke employees.	Book-keepers and clerks.	All other employees.	Total outside.	
Sherwood,	Jefferson,	1	1	1	5	2	16	2	2	2	1	1	29	1	1	1	2	1	1	1	4	33
Trout Run,	Jefferson,	1	1	1	31	25	150	25	9	2	10	15	242	3	1	3	6	10	65	4	74	216
Virginia,	Jefferson,	1	1	1	12	15	130	15	9	2	5	15	204	1	1	1	3	4	4	4	8	212
Totals,	Jefferson,	3	3	3	187	188	920	158	89	15	58	35	1,658	13	3	3	27	135	4	104	284	1,912
Pittsburg and Buffalo Co.	Armstrong,	1	1	1	100	7	60	7	7	1	5	1	188	1	1	3	1	10	3	6	25	213
Johnetta No. 1,	Armstrong,	1	1	1	25	2	20	2	1	1	3	1	54	1	1	1	2	3	1	1	4	58
Johnetta No. 2,	Armstrong,	1	1	1	125	9	80	9	7	1	8	1	242	1	1	4	3	10	3	7	29	271
Totals,	Armstrong,	3	3	3	255	18	160	18	15	3	16	2	482	2	2	8	5	23	5	14	38	520
"K," Pardoe Coal Co.	Mercer,	1	1	1	50	6	1	1	6	1	1	3	61	1	1	1	3	1	1	1	5	66
Pardoe,	Mercer,	1	1	1	109	12	1	1	12	1	1	3	117	1	1	2	2	1	1	1	5	122
Totals,	Mercer,	2	2	2	159	18	2	2	18	2	2	6	178	2	2	3	5	2	2	2	10	188
American Sheet Steel Co.	Armstrong,	1	1	1	18	2	1	1	2	1	1	1	21	1	1	1	1	1	1	1	1	21
Kirkpatrick,	Armstrong,	1	1	1	7	1	1	1	1	1	1	1	9	1	1	1	1	1	1	1	1	10
Kittanning Plate Glass Co.	Armstrong,	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	10
Kittanning,	Armstrong,	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	10
Turner Coal, Coke & Mining Co.	Butler,	1	1	1	67	7	1	1	7	1	3	1	76	1	1	1	1	1	2	2	8	84
Keystone No. 1,	Butler,	1	1	1	67	7	1	1	7	1	3	1	76	1	1	1	1	1	2	2	8	84

Keystone No. 2.	1	10	1	1	12	1	1	1	13
Totals.	2	75	8	3	88	2	3	9	57
Kerr Coal Co.									
Kerr No. 1.	1	10	1	1	12	1	1	1	13
Kerr No. 8.	1	70	2	1	74	1	1	4	81
Totals.	2	80	3	1	86	2	1	4	94
Lucas Coal Co.									
Lucas.	1	40	3	3	47	1	1	3	53
Ben Franklin Coal Co.									
Metcalf.	1	30	2	1	34	1	1	2	38
Monterey Coal Co.									
Monterey.	1	30	5	1	37	1	2	3	40
Pittsburg Plate Glass Co.									
Mosgrove.	1	20	6	2	3	114	1	2	131
Mark Packard.									
Mahoning.	1	20	1	1	24	1	1	6	32
Nellie Coal Co.									
Nellie.	1	25	2	2	30	2	2	4	34
Penn'a Salt Mfr. Co.									
Natrona No. 1.	1	17	3	3	152	1	2	10	171
Natrona No. 2.	1	5	2	2	42	1	1	3	47
Totals.	2	22	14	5	194	1	3	13	218
C. P. McAfferty.									
Monarch.	1	7	4	2	69	1	2	5	81
Oak Ridge Mining Co.									
Oak Ridge Nos. 3 and 5.	1	103	6	10	215	1	3	20	278
Ellis, Blum Co.									
Oceanica.	1	4	2	2	21	1	2	1	25
Pine Run Coal & Coke Co.									
Pine Run Nos. 1 and 2.	1	60	5	1	67	1	1	3	74
The Pollock Coal and Lime Co.									
Pollock.	1	25	2	5	33	1	1	2	38
N. Y. & C. Gas Coal Co.									
Phum Creek.	1	250	11	11	275	1	2	13	278
Stony Creek.	1	100	17	8	225	1	4	17	251
Totals.	2	410	28	18	455	2	6	20	522

Sterling Coal Co.	Clarion.....	1	60				3	1	1	1	66	1	1	1	1	1	3	6	72
Sligo Coal and Mining Co.	Clarion.....	1	10	3	30	3	3	1	1	1	53	1	1	2	1	1	4	57	
State Line Coal Co.	Beaver.....	1	90				5	1	3	1	101	1	3	3	3	8	15	116	
Shenango Coal Co.	Mercer.....	1	45				2		6	1	55	1	3	2	1	1	7	62	
Thompson Run Coal Co.	Beaver.....	1	84				7	3	2	4	101	1	2	2	1	6	12	113	
Underwood Mining Co.	Clarion.....	1	15				2		1		19	1	1	1	1	1	3	22	
Valley Coal Co.	Westmoreland.....	1	25				1			1	18	1	1	1	1	2	4	32	
West Penn Mining Co.	Westmoreland.....	1	40				3		1		45	1	1	1	1	4	7	52	
The Washville Coal Co.	Builer.....	1	10				4	1	2	2	50	1	1	1	1	3	9	59	
Washville No. 1.	Builer.....	1	10				1				12	1	1	1	1	1	1	15	
Washville No. 2.	Builer.....	2	50				5	1	2	2	62	1	1	1	1	6	20	72	
Totals.																			
Wm. K. Hamilton	Builer.....	1	50				2		1		19	1	1	1	1	2	4	23	
Builer Hill Black Coal Co.	Mercer.....	1	19				2				22			1	1	2	4	26	
Builer Coal and Coke Co.	Builer.....	1	9				1			1	12	1	1	2	1	2	2	17	
Grand totals.		17	3,158	229	1,974	509	621	121	303	161	8,916	78	43	155	176	145	82	364	1,435

[illegible]

TABLE IV.—List of fatal accidents that occurred in and about the mines of the Third Bituminous District for the year ending December 31, 1902.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan. 26	Giovanni Dalesandron.	Italian.	Miner.	50	M.	1	4	Diamond No. 1.	Mercer.	Was killed instantly while working in his room by a fall of roof slate; he no doubt accidentally knocked out one of the posts and slate fell upon him with fatal results.
April 24	Frank Montanzon.	Italian.	Miner.	33	M.	1	4	Sandy Creek.	Allegheny.	Was killed by a fall of slate; was working in his room; he had neglected to support the roof properly with timber.
May 24	William Tonks.	English.	Miner.	39	M.	1	3	Pardoe.	Mercer.	Was killed by a fall of roof slate on the roadway in the mine while on his way to work in the morning; the roof was secured by timbers at the point where it fell, but the results proved that the timber work was not of a very substantial character.
26	Milo Stollings.	American.	Miner.	44	S.	.....	.....	Puhl No. 1.	Mercer.	Was killed by a fall of "draw slate" in a room in the mine while he was watching his brother-in-law pulling it down.
26	James Spence.	Scotch.	Machine leader.	46	S.	.....	.....	Johnetta.	Armstrong.	Was killed by a fall of roof slate while he was loading a car in his room; the conditions of the working place where this accident occurred were all favorable to safety.
June 2	Louis Pastoria.	Italian.	Miner.	18	S.	.....	.....	Aladdin.	Armstrong.	Was killed by a fall of roof slate while extracting an entry pillar in the mine; he had fired a shot in the mined coal and had wedged some of it down and was loading it into a car, when a large stone fell upon him.

TABLE IV.—Continued.

Date of accident	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
25	Domenico Perogoli,	Italian,	Miner,	26	M.	1	1	Grant,	Butler,	Was killed by a fall of roof slate while loading a car in his room; he failed to examine the roof after he had taken down the coal from beneath it.
July 11	Domenic Oddis,	Italian,	Miner,	25	S.	.....	.....	Sandy Creek,	Allegheny,	Was killed by a fall of "draw slate" in his room while taking down some coal.
Sept. 21	George Nulph,	American,	Miner,	19	S.	.....	.....	Fairmount No. 1,	Armstrong,	Was killed by a fall of roof slate while he was working; the men were securing the roof with posts, when it caved in upon them, resulting in the death of Nulph.
25	John Hoggline,	Italian,	Miner,	41	W.	2	.....	Cheswick,	Allegheny,	Was killed instantly by a fall of roof shale while working at the bottom of the shaft with four other men; Hoggline was loading rock into a mine car, when a large mass of roof fell upon him.
Oct 3	Chas. Fink,	American,	Miner,	19	S.	.....	.....	Mesgrove,	Armstrong,	Was fatally injured by a fall of roof slate while he was extracting an entry pillar in the mine; he lived several days.
15	Peter Semua,	Russian,	Miner,	30	M.	1	2	Iathnel,	Jefferson,	Was fatally injured by a fall of slate while he was loading a car with coal in his room in the mine.
21	Thomas Pollard,	American,	Miner,	57	W.	.....	.....	Kittanning Plate Glass,	Armstrong,	Was instantly killed by a fall of roof slate while he was loading a car with coal in the entry he was driving.

Nov. 10	Fred Marico,	Italian,	Company man,	20	M.	1	2	Trout Run,	Jefferson,	He was killed by being run over by an electric motor outside of the mine; he was a spragger employed for this purpose outside of the mine, and when the motor, with its trip of cars, came outside of the mine he jumped on front end of it and fell off and was run over; he had no business to be on the motor.
Dec. 23	Gilbert Duff,	Irish,	Miner,	56	S.	.....	.....	Grant,	Butler,	Was instantly killed by a fall of roof shale while he was extracting a room pillar in the mine; he had failed to secure the roof properly.

TABLE V.—List of non-fatal accidents that occurred in and about the mines of the Third Bituminous District for the year ending December 31, 1902.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan. 4	Wm. Cateson,	American,	Company man,	21	S.	Rathmel,	Jefferson,	Leg broken, head injured and a pick run into his arm; caused by a fall of roof rock while he was cutting a notch in it for a cross bar in the mine; the accident was unavoidable.
6	James Shannon,	American,	Driver,	30	S.	Soldier Run No. 1,	Jefferson,	Two ribs broken by being squeezed between mine cars in the mine; the accident was due to the carelessness of the victim.
7	John McNeal,	Scotch,	Company man,	56	M.	Soldier Run No. 2,	Jefferson,	Right foot injured by a fall of coal.
8	Jurt Steel,	American,	Miner,	25	M.	Engle,	Clarion,	Rib broken and hand cut by mine cars.
13	James Stewart,	American,	M. loader,	33	S.	Rail No. 1,	Mercer,	Leg broken by a fall of "draw slate" in the mine.
14	Walter Prosswate,	English,	Driver,	22	S.	Soldier Run No. 1,	Jefferson,	Hand injured by cars in the mine.
15	John Dunn,	American,	Miner,	53	S.	Monarch,	Jefferson,	Hand injured by a fall of coal in the mine.
21	Alfred Rouser,	American,	Miner,	16	S.	Pardoe,	Mercer,	Injured by coal from a shot in the mine.
Feb. 11	George Powell,	American,	Miner,	48	S.	Carrier,	Jefferson,	Leg broken by mine cars outside of mine.
3	John Ierra,	American,	Miner,	35	S.	Metzger,	Westmoreland,	Fingers injured by cars in mine.
12	George Crouch,	American,	Miner,	41	M.	Grant,	Butler,	Ribs broken by a fall of slate.
17	Smith McKee,	American,	Driver,	24	M.	Hamilton,	Jefferson,	Injured by a fall of rock.
27	Vernon Antonia,	Tyroleran,	Miner,	25	S.	Hamilton,	Jefferson,	Injured by cars in mine.
Mar. 19	Frank Fabbro,	Italian,	Miner,	30	M.	Line Run No. 1,	Jefferson,	Injured by a fall of coal.
26	Thomas Pope,	American,	Miner,	25	M.	Sandy Creek,	Westmoreland,	Thigh fractured by a fall of coal.
Apr. 12	Edward Myers,	American,	Driver,	35	M.	Soldier Run No. 1,	Allegheny,	Leg broken by a fall of slate.
May 13	James Keadon,	American,	Company man,	27	S.	Soldier Run No. 1,	Jefferson,	Leg broken by a fall of slate.
June 12	Wm. Materson,	American,	Miner,	38	M.	Monarch,	Jefferson,	Finger crushed by cars in the mine.
July 14	Charles Carmoy,	American,	Miner,	46	M.	Hastings,	Clarion,	Injured by a fall of roof slate.
28	William Carmoy,	American,	Company man,	23	M.	Soldier Run No. 2,	Clarion,	Leg broken by a fall of "draw slate."
29	Charles Commodore,	Italian,	Miner,	36	M.	Mizer,	Butler,	Leg broken by cars in the mine.
Sept. 12	George Hill, Jr.,	American,	Company man,	30	M.	Sandy Creek,	Allegheny,	Leg broken by cars in the mine.

13	Joseph Burtor,	Slavonian, ..	Miner,	28	S.	Bethel,	Armstrong,	Burned by premature explosion of powder.
15	Ksawery Halecz,	Polish,	Miner,	26	M.	Hites,	Allegheny,	Injured by a fall of coal.
25	Louis Borese,	Italian,	Miner,	36	S.	Cheswick,	Allegheny,	Injured by a fall of coal.
30	John Borese,	Polish,	Miner,	45	M.	Rathmel,	Jefferson,	Leg broken by a fall of coal.
30	Peter Hauchok,	Polish,	Miner,	21	S.	Rathmel,	Jefferson,	Arm injured by a fall of coal.
21	John Holeska,	Slavonian, ..	Miner,	42	M.	Creighton,	Allegheny,	Slightly burned by a premature explosion of powder.
23	Henry Huntsburger, ..	German,	M. scraper, ..	25	S.	Brady's Bend,	Armstrong,	Injured by a mining machine.
24	Michael Novack,	Slavonian, ..	Miner,	41	S.	Thompson Run,	Beaver,	Leg broken by a fall of slate.
29	Ed. Sweller,	American, ..	Miner,	16	S.	Oak Ridge No. 5,	Armstrong,	Injured internally by a fall of slate.
11	Brun Leon,	Italian,	M. loader,	62	M.	Hamilton,	Jefferson,	Leg fractured by a fall of coal in the mine.
12	Wm. Marlow, Jr.,	English,	Miner,	36	M.	Sandy Creek,	Allegheny,	Foot badly injured by a fall of slate.
30	Mike Tlasch,	Hungarian, ..	Miner,	30	S.	Annandale No. 2,	Butler,	Leg broken by a fall of slate.

Oct.

Nov.

Dec.



Fourth Bituminous District.

ELK, JEFFERSON, CLEARFIELD, CENTRE, TIOGA, CLINTON, LYCOM-
ING, BRADFORD AND MCKEAN COUNTIES.

Du Bois, Pa., February 28, 1903.

Hon. James W. Latta, Secretary of Internal Affairs, Harrisburg, Pa.

Dear Sir: In accordance with the act of Assembly, approved May 15th, 1893, I have the honor of herewith submitting my annual report as Inspector of Mines for the Fourth Bituminous District for the year ending December 31, 1902.

The past year has been one of unusual activity; several new mines were opened in the district, and preparations were being made at the close of the year to open several more. The demand for coal was active and prices were unusually high, which kept the mines in operation very steadily with some exceptions, where railroad cars for shipment, and local strikes reduced the average number of days worked, and curtailed the total tonnage to a considerable extent. The greatly increased demand for coal induced every person in possession of a tract of coal land to develop it, and place the product on the market, but the production from such mines is not included in this report, as the majority of them did not employ a sufficient number of persons to come under the provisions of the law. The production of coal as reported to this office, amounts to 6,418,810 short tons, which is 616,031 tons more than was produced in the district during the previous year, of this 6,058,593 tons were shipped by rail, 89,680 tons were used at the mines, and 59,250 tons was sold to local trade, while 211,287 tons was manufactured into 133,121 tons of coke, which found a ready market, and owing to the increased demand for such fuel for foundry, furnace and domestic purposes, quite a number of coke ovens have been built, and others that have not been in operation for many years, are being repaired and made ready for use.

The number of accidents in and about the mines of the district during the year, compared with the preceeding year, have decreased by two fatal and six non-fatal; there having been eleven of the

former and thirty-eight of the latter. In consequence of these fatalities, six wives were made widows and thirteen children left fatherless.

Several important changes in the ownership of mines in the district have taken place during the year, as will be seen in the body of the report; the most important of which was the purchase of the Berwind-White Coal Mining interests, consisting of the Berwind-White shaft colliery, and several hundred acres of coal land adjacent thereto, by the Buffalo and Susquehanna Coal and Coke Co. This company also assumed control of their Tyler plant which had been leased to Frank Williams & Co., and have purchased several thousand acres of coal land in Clearfield and Jefferson counties, which will be developed in the near future. The mines of the district have been visited as often as my other duties would permit. The reports of such visits, stating the conditions in which the mines were found, have been sent to the Bureau of Mines from time to time. I am gratified to state that, where suggestions have been made, looking to the betterment of ventilation, and general conditions of the mines, in most instances, an effort has been made to comply.

The report contains the usual statistical tables, together with a description of the old and new mines, also a description of the most important improvements made during the year in the district, and such other data as will be of interest.

Respectfully submitted,

ELIAS PHILLIPS,
Inspector.

Summary of Statistics for 1902.

The figures denoting production, shipment, etc., are for short tons.

Number of mines in district,	85
Number of mines in operation during 1902,	83
Number of tons of coal produced,	6,418,810
Number of tons shipped to market,	6,058,593
Number of tons sold at mines to local trade,	59,250
Number of tons consumed at mines in generating steam and heat,	89,680
Number of coke ovens in the district,	552
Number of coke ovens in operation during 1902,	352
Number of tons of coke produced,	133,121
Number of tons of coal used in manufacture of coke, ...	211,287
Number of tons produced by pick mining, approxi- mately,	5,161,213
Number of tons produced by compressed air machines, approximately,	906,705

Number of tons produced by electrical machines, approximately,	350,892
Number of persons employed inside the mines,	8,490
Number of persons employed outside, including coke workers,	1,184
Number of persons employed at manufacture of coke,...	75
Number of fatal accidents inside the mines,	10
Number of tons produced for each fatal accident inside, ..	641,881
Number of persons employed per fatal accident inside,...	849
Number of fatal accidents outside,	1
Number of persons employed per fatal accident outside, ..	1,184
Number of wives made widows by fatal accidents,	6
Number of children orphaned by fatal accidents,	13
Number of non-fatal accidents inside of mines,	35
Number of persons employed per non-fatal accident inside,	242.6
Number of non-fatal accidents outside,	3
Number of persons employed per non-fatal accident outside,	394.7
Number of steam locomotives used inside,	2
Number of electric motors used inside,	26
Number of fans used for ventilation,	23
Number of furnaces used for ventilation,	56
Number of gaseous mines in operation during 1902,	2
Number of non-gaseous mines in operation during 1902, ..	81
Number of new mines opened in 1902,	7
Number of old mines abandoned during 1902,	4

A. Production of Coal and Coke During the Year 1902.

Names of Companies.	Coal.	Coke.
Northwestern Mining and Exchange Co.,	818,366	
Clearfield Bituminous Coal Corporation,	695,182	59,688
Jefferson-Clearfield Coal and Iron Co.,	676,617	
Blossburg Coal Co.,	491,808	
Shawmut Mining Co.,	460,506	1,699
Lehigh Valley Coal Co.,	440,874	
Buffalo and Susquehanna Coal and Coke Co.,	439,121	29,218
Kersey Coal and Coke Co.,	387,473	23,754
Kettle Creek Coal Mining Co.,	365,732	
Morris Run Coal Mining Co.,	363,618	
Jefferson Coal Co.,	275,600	
Rochester and Pittsburg Coal and Iron Co.,	226,468	18,762
Magee & Ellsworth,	207,739	
Kelly Brothers,	112,409	
Red Run Coal Co.,	112,320	
Iroquois Coal Co.,	112,264	
Clearfield and Grampian Coal Co.,	51,934	
Atherton & Barnes,	22,151	
St. Marys' Sewer Pipe Co.,	20,840	
Harbison Walker Co.,	20,290	
Mathew Shadeck,	19,328	
A. G. Spears,	18,923	
Hall & Kaul,	14,181	
Priscilla Coal Mining Co.,	12,759	
Isaac Stage,	12,691	
Kelly & Nugent,	11,113	
Charles Schultz,	10,758	
J. F. Keating,	7,245	
George Rees & Co.,	6,000	
Clinton Coal Co.,	4,500	
Totals,	6,418,810	133,121

Production by Counties.

Names of Companies.	Coal.	Coke.
Clearfield,	1,768,857	107,668
Elk,	1,421,855	25,453
Jefferson,	1,127,241	
Tioga,	1,073,923	
Centre,	534,137	
Clinton,	370,232	
Lycoming,	112,320	
McKean,	7,245	
Totals,	6,418,810	133,121

TABLE B—Continued.

Names of Companies.	Number of lives lost inside.	Number of lives lost outside.	Total number of lives lost.	Number severely injured outside.	Number severely injured inside.	Total number severely injured.	Tons of coal produced per each life lost inside.	Tons of coal produced per serious injury inside.	Number employees inside of mines.	Number employees outside of mines.	Total number employed.	Number of employees inside for each life lost.	Number of employees inside for each severe injury.	Number of employees outside for each life lost.	Number of employees outside for each severe injury.
Nelly & Nigant.	23	.....	25	.....	.....	.....	.....
Charles Smith.	21	.....	24	.....	.....	.....	.....
J. F. Keating.	16	.....	18	.....	.....	.....	.....
George Ross & Co.	32	.....	34	.....	.....	.....	.....
Harlan Coal Co.	51	.....	89	.....	.....	.....	.....
Total.	10	1	11	35	3	38	641,881	182,405	8,490	1,184	9,674	849	243	1,184	395

Average production per employee, 663.51.

C. Classification of Fatal Accidents for the Year 1902.

	Inside of Mines.										Outside of Mines.					Grand total.								
	By Falls of			By Falling into							Total inside.													
	Coal.	Slate.	Roof.	By mine cars.	By explosion of gas.	Smothered by gas.	Powder and dynamite.	By blasts, etc.	Shafts.	Slopes.	Manways, breasts, etc.	(Crushed at batteries.	By mules.	Suffocated by coal, etc.	Miscellaneous causes.	Total inside.	By cars.	By machinery.	By suffocation.	By boiler explosions.	Miscellaneous causes.	Total outside.		
February,	1															1						1	1	
May,	1																					1	1	
June,	1																					1	1	
August,					2											2							2	2
September,				1																			1	1
October,			2					1															1	1
November,				1																			1	1
Totals,	4		2	1	10			1								10							11	11

F. Occupations of Employees Severely Injured Inside and Outside the Mines of the Fourth Bituminous District During 1902.

Months.	Inside.											Outside.								Grand total.	
	Mine foremen.	Assistant mine foremen.	Fire bosses.	Miners.	Machine runners.	Machine loaders.	Machine scrapers.	Drivers and runners.	Door boys and helpers.	Company men.	All other employees.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	Coke employees.	Book-keepers and clerks.	All other employees.		Total outside.
January.	1			27				2			1	37									1
February.				21				1			1	23									
March.				1							1	2									
April.																					
May.	1							1	1			2							1	1	1
June.																					
July.																					
August.																					
September.																					
October.								1	1			2									
December.																					
Totals.	1			27				2	2		4	37							1		38

G. Nationality of Employes Killed or Fatally Injured Inside and Outside the Mines During 1902.

	Americans.	Irish.	Poles.	Italians.	Slavs.	Lithuanians.	Swedes.	Total.
February,				1				
May,	1						1	
June,					1			
August,				1				
September,		1	1					
October,					1	2		
November,	1							
Totals,	2	1	1	2	2	2	1	11

H. Nationality of Employes Severely Injured Inside and Outside the Mines During 1902.

	Americans.	English.	Scotch.	Irish.	Poles.	Italians.	Slavs.	Austrians.	Swedes.	Finn.	Total.
January,			1						1		
February,	3										
March,	1	1									
April,	1				1			1			
May,	2						1			1	
June,					1		1				
July,								1			
August,					2			1			
September,	1			3	2	1					
October,	2	1				1					
December,	2			1	1	2					
Totals,	12	2	1	4	7	5	2	3	1	1	38

Shawmut No. 5.	Drift.	Non-gas.	Fan.	18 x 4.5	5	Brazil.	Steam.	3	55,000	48,600	57,900	79	708
Shawmut No. 6.	Slope.	Non-gas.	Fan.	18 x 4.5	8	Brazil.	Steam.	2	66,600	66,600	66,720	84	793
Shawmut No. 8.	Drift.	Non-gas.	Fan.	10 x 4	1.5	Kinney.	Steam.	4	54,000	53,700	54,840	195	505
Shawmut No. 9.	Drift.	Non-gas.	Furnace.	Non-gas.	Non-gas.	Non-gas.	Non-gas.	32	18,000	18,480	18,480	79	321
Shawmut No. 10.	Drift.	Non-gas.	Furnace.	Non-gas.	Non-gas.	Non-gas.	Non-gas.	48	19,200	15,600	21,600	79	321
Mead Run No. 4.	Drift.	Non-gas.	Furnace.	Non-gas.	Non-gas.	Non-gas.	Non-gas.	48	25,400	25,400	26,000	79	321
Blossburg Coal Co.													
Arnot No. 1.	Drift.	Non-gas.	Furnace.	Non-gas.	Non-gas.	Non-gas.	Non-gas.	36	17,220	17,220	18,600	120	144
Arnot No. 2.	Drift.	Non-gas.	Furnace.	Non-gas.	Non-gas.	Non-gas.	Non-gas.	32	23,850	23,850	24,640	101	318
Arnot Nos. 3 and 5.	Drift.	Non-gas.	Fan.	18 x 6	2	Murphy.	Steam.	3	11,300	11,300	80,000	230	112
Arnot No. 7.	Drift.	Non-gas.	Furnace.	Non-gas.	Non-gas.	Non-gas.	Non-gas.	40	16,800	16,800	17,760	166	112
Bear Run.	Drift.	Non-gas.	Fan.	14 x 4	1.4	Guibal.	Steam.	2	48,640	48,640	48,920	109	283
Maple Hill.	Drift.	Non-gas.	Furnace.	Non-gas.	Non-gas.	Non-gas.	Non-gas.	32	21,000	21,000	22,400	216	26
Clearfield Bit. Coal Corporation.													
Moranvian.	Drift.	Non-gas.	Furnace.	Non-gas.	Non-gas.	Non-gas.	Non-gas.	54	38,550	38,550	39,700	172	224
Pleasant Hill.	Drift.	Non-gas.	Furnace.	Non-gas.	Non-gas.	Non-gas.	Non-gas.	54	44,600	44,600	49,200	216	26
Grass Flat No. 9.	Drift.	Non-gas.	Furnace.	Non-gas.	Non-gas.	Non-gas.	Non-gas.	54	38,400	38,400	31,600	255	480
Grass Flat No. 10.	Drift.	Non-gas.	Furnace.	Non-gas.	Non-gas.	Non-gas.	Non-gas.	54	49,740	44,200	48,680	255	480
Grass Flat No. 11.	Drift.	Non-gas.	Furnace.	Non-gas.	Non-gas.	Non-gas.	Non-gas.	54	34,000	34,000	38,800	252	203
Knox Run No. 1.	Drift.	Non-gas.	Furnace.	Non-gas.	Non-gas.	Non-gas.	Non-gas.	54	20,000	20,000	20,680	252	203
Knox Run No. 2.	Drift.	Non-gas.	Furnace.	Non-gas.	Non-gas.	Non-gas.	Non-gas.	54	21,000	19,480	22,400	252	203
Lehigh Valley Coal Co.													
Sugar Camp Nos. 2 and 4.	Drift.	Non-gas.	Furnace.	Non-gas.	Non-gas.	Non-gas.	Non-gas.	64	24,000	24,000	32,400	301	227
Sugar Camp Nos. 7 and 12.	Drift.	Non-gas.	Furnace.	Non-gas.	Non-gas.	Non-gas.	Non-gas.	64	25,200	25,200	34,000	301	227
Sugar Camp Nos. 5 and 8.	Drift.	Non-gas.	Furnace.	Non-gas.	Non-gas.	Non-gas.	Non-gas.	90	19,200	17,850	32,500	25	648
Sugar Camp No. 13.	Drift.	Non-gas.	Furnace.	Non-gas.	Non-gas.	Non-gas.	Non-gas.	28	16,200	16,200	27,820	87	902
Sugar Camp No. 9.	Drift.	Non-gas.	Furnace.	Non-gas.	Non-gas.	Non-gas.	Non-gas.	48	27,000	27,000	24,200	87	902
Sugar Camp No. 10.	Drift.	Non-gas.	Furnace.	Non-gas.	Non-gas.	Non-gas.	Non-gas.	48	27,000	24,000	24,200	87	902
Sugar Camp No. 11.	Drift.	Non-gas.	Furnace.	Non-gas.	Non-gas.	Non-gas.	Non-gas.	48	27,000	27,000	27,400	87	902
Morris Run Coal Mining Co.													
Jonas No. 1.	Slope.	Non-gas.	Fan.	20 x 4.5	2	Guibal.	Steam.	32	63,600	61,600	64,200	600	105
New Mine No. 2.	Drift.	Non-gas.	Furnace.	Non-gas.	Non-gas.	Non-gas.	Non-gas.	32	15,000	15,000	17,500	139	107
Magye & Ellsworth.													
Antrim No. 1.	Drift.	Non-gas.	Fan.	8 x 3	8	Murphy.	Steam.	1	31,400	31,400	34,600	52	604
Antrim No. 5.	Slope.	Non-gas.	Fan.	20 x 4.5	1.2	Guibal.	Steam.	1	29,600	29,600	32,400	152	184
Anna "S."	Drift.	Non-gas.	Fan.	16 x 3	.5	Guibal.	Steam.	3	31,400	28,400	31,680	166	300
Red Run Coal Co.													
Red Run No. 2.	Drift.	Non-gas.	Fan.	6	6	Sline.	Electricity.	1	20,000	20,000	20,400	175	414
Red Run No. 7.	Drift.	Non-gas.	Fan.	6	6	Sline.	Electricity.	1	20,400	20,400	20,200	175	414
Red Run No. 8.	Drift.	Non-gas.	Fan.	6	6	Sline.	Electricity.	1	22,300	22,500	24,500	175	414
Kettle Creek Coal Mining Co.													
Kettle Creek No. 1.	Drift.	Non-gas.	Furnace.	Non-gas.	Non-gas.	Non-gas.	Non-gas.	40	29,400	29,400	35,000	237	300
Kettle Creek Nos. 2 and 3.	Drift.	Non-gas.	Fan.	6	6	Sline.	Steam.	1	42,600	42,600	45,000	115	260
West Side mine.	Drift.	Non-gas.	Furnace.	Non-gas.	Non-gas.	Non-gas.	Non-gas.	40	30,000	30,000	31,500	115	260
Clinton Coal Co.													
Clinton mine.	Drift.	Non-gas.	Fan.	7	7	Sline.	Steam.	1	30,000	30,000	31,500	115	260

TABLE I—Continued

Names of Operators and Mines.	Kind of opening.	Gaseous or non-gaseous.	Method of ventilation.	Diameter and width of fan in feet.	Water gauge developed—in inches.	Name of fan.	Power used.	Area of furnace bars in square feet.	Number of air splits of air currents.	Number of cubic feet of air per minute entering the mine at inlet.	Total quantity of air per minute circulating in all the splits in cubic feet.	Number of cubic feet per minute passing out at outlet.	Number of persons employed inside.	Average number of cubic feet per minute provided for each person.
Kersey Coal and Coke Co. Byrne No. 2. Elk No. 3. Cardiff No. 41.	Drift. Drift. Drift.	Non-gas. Non-gas. Non-gas.	Furnace. Furnace. Furnace.	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	30 48 24	2 4 4	48,460 31,400 56,400	48,400 30,200 51,820	30,600 31,800 56,820	275 138 309	177 212 182
Brook, Inequis Coal Co.	Drift.	Non-gas.	Furnaces, 2	.....	.....	.....	.....	64	2	52,400	52,200	54,000	191	274
Jefferson Coal Co. Coal Glen No. 1.	Drift.	Non-gas.	Fan.....	5	.....	Clark,	Steam and comp. air.	.....	2	21,040	31,600	31,400	278	246
Coal Glen No. 2. Bechtel No. 2.	Drift. Drift.	Non-gas. Non-gas.	Fan..... Furnace.	8	.....	Clark,	Gasoline.	15	1 1	37,500 9,400	17,500 9,400	24,800 10,000	23	418
Kelly Brothers. Snow shoe No. 4. Snow shoe No. 5. Catawba.	Drift. Drift. Drift.	Non-gas. Non-gas. Non-gas.	Furnace. Furnace. Furnace.	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	32 32 70	1 1 1	22,000 33,250 27,400	18,400 23,250 23,680	23,600 38,400 28,100	161 45	313 600
St. Mary's Sewer Pipe Co. Kaul Mine.	Drift.	Non-gas.	Furnace.	.....	.....	.....	.....	32	1	14,400	14,400	15,000	55	262
J. F. Keating. Lynah.	Drift.	Non-gas.	Furnace.	.....	.....	.....	.....	24	1	4,600	4,600	4,840	16	287
Kelly & Nugent. Cato.	Drift.	Non-gas.	Natural.	.....	.....	.....	.....	.....	.....	3,600	3,600	3,200	23	153
Isaac Stage. Clearfield No. 10.	Drift.	Non-gas.	Furnace.	.....	.....	.....	.....	12	1	4,100	4,100	4,600	18	233

J. Names of mines using coal cutting machines, names of machines, power used, geological and local names of seams, thickest and thinnest seams where machines are used, and the approximate number of tons produced by machines during 1902.

	Kind of opening.	Gaseous or non-gaseous.	Name and Number of Machines in Use.				Total machines used.	Power used by machines.	Geological and local name of seam.	Average thickness in inches.	Height of Seam in Inches.		Approximate number of tons produced by machines.
			Ingersoll.	Sullivan.	Harrison.	Jeffrey.					Thickest.	Thinnest.	
Dubois shaft No. 1.	Shaft.	Gaseous.	10	4			14	Compressed air.	Lower Freeport, D.	60	72	48	225,288
Helvetia.	Slope.	Gaseous.	18				19	Compressed air.	Lower Freeport, D.	72	84	60	225,800
Reedster.	Drift.	Non-gas.	5	2			24	Compressed air.	Lower Freeport, D.	74	84	64	128,250
London.	Drift.	Non-gas.	6	15			33	Compressed air.	Lower Freeport, D.	74	84	64	280,730
Coal Glen.	Drift.	Non-gas.		2			2	Compressed air.	"B." Blossburg.	48	54	42	5,130
Antrim No. 5.	Slope.	Non-gas.		3			3	Compressed air.	"B." Blossburg.	48	54	30	41,517
Anna S.	Drift.	Non-gas.		7			7	Compressed air.	Lower Freeport, D.	36	48	30	120,000
West Charlton.	Drift.	Non-gas.				7	7	Electricity.	Lower Freeport, D.	45	54	36	47,052
Charlton No. 27.	Drift.	Non-gas.				4	4	Electricity.	Upper Kittanning, B.	35	40	30	52,167
Shawmut No. 6.	Slope.	Non-gas.				9	9	Electricity.	Lower Kittanning, B.	35	40	30	48,886
Shawmut No. 8.	Drift.	Non-gas.		1	9	16	26	Elec. & com. air.	Lower Kittanning, B.	35	40	30	82,817
Totals.			30	40	42	49	161						1,257,597

Examination of Mine Foremen and Fire Bosses.

The annual examination of persons applying for certificates of competency of mine foremen and fire bosses, was held at Du Bois, on January 21, 22 and 23d, 1902. There were thirty-six applicants present, and the following were awarded certificates of second grade:

George Harris, Reynoldsville; Joseph Reed, DuBois; H. M. Stewart, Westville; Robert E. Stewart, Peale; James Patterson, Sykesville; A. N. Ruddock, Enenora; Alexander Stewart, Dagus Mines; Mathew L. Smith, Antrim; Robert Martin, David Heron, Edward McCabe, Arnot; John Stratton, James McCloskey, Brockwayville; Neil Shaw, Charles E. Potter, Potterdale.

The board of examiners was composed of George L. Miller, operator; John Aikman, miner, and Elias Phillips, Mine Inspector.

A Description of Improvements for 1902.

In the year 1899, the Kersey Coal and Coke Co. secured 15,000 acres of coal lands on the Bennetts Branch of the Sinnemahoning Creek, in Elk and Clearfield counties. After prospecting and finding coal, a railroad was constructed about fourteen miles in length, and during the same year three mines were opened, which are now producing a large daily tonnage, and this coal is being shipped to northern markets, where it is giving excellent satisfaction. The No. 21 mine has been equipped with three Ingersoll air compressors, which are furnishing motive power for twenty-nine Ingersoll mining machines of the Puncher type. There has also been a 300 horse power haulage plant (tail rope system) added to the equipment for the purpose of transporting coal through the main heading to its mouth, from whence a locomotive delivers it to the tippie. There is also under construction a 16-foot diameter Capell fan. Mine No. 31 is adjacent to mine No. 21 and in the same field. This mine is equipped with a "Phillips Automatic Dump," which has a capacity of 2,000 tons of coal per day. Ingersoll mining machines are being installed. The main headings of the mine are laid with 35 pound steel rails and a 12 pound T rail is used in the rooms, and cars of one ton capacity are used. The mine village known as Brynedale, is located near the two above named mines, which consists of 205 dwellings, each containing seven rooms. A large store is located at this place to furnish the employes with supplies, which is of the best required for a camp of this magnitude. The village is supplied with pure mountain water, conveyed through six inch pipe. The company has also provided a fire system, and has on hand hose carts and reels to transport the fire apparatus to and from the hose-house by the office force, which is organized for the protection of property. At the village known as

Cardiff where mine N. 41 is located, 128 seven-room houses have been built, together with a large store building.

Mine No. 41 is also equipped with a "Phillips Automatic Dump" of 2,000 tons capacity, which is located 1,200 feet from the drifts; the coal is hauled from the drifts to the tipple by a 12 ton locomotive.

Near the mines Nos. 21 and 31, 80 coke ovens of the Bee-hive type have been built, and the intention is to build 200 more in the near future. The designing and construction of these plants are under the management of Mr. George S. Ramsey.

The North Western Mining and Exchange Company, completed the rebuilding of its plant at the Dagus No. 1 slope, which was destroyed by fire during the month of December, 1901, and work was resumed in early part of April. The tipple was made considerably larger than the original one, and the general arrangements for handling coal improved in many ways. The power house, a brick structure, is located some distance from the tipple, and contains a battery of four 150 H. P. return tubular boilers, made by the Phoenix Iron Works, Meadville, Pa. The hoisting engines for the tail rope haulage are 150 H. P., built by the Robinson Machine Co., Monongahela, Pa. There was also another hoisting engine of 150 H. P. with single drum installed to hoist the coal to the surface. The fan shaft was enlarged and the airways leading to same improved during the year. The Dagus No. 3 mine was equipped with two 100 H. P. return tubular boilers, and a pair of 150 H. P. haulage engines, also a new iron fan to replace the old one.

The following improvements were under construction at the London mine of the Jefferson and Clearfield Coal and Iron Co. A battery of four boilers of 150 horse power each, built by the Phoenix Iron Works Co. Two 24 x 22 inches McEwen engines, direct connected to two 250 K. W. Thompson Ryan Generators. There are also on the ground seven 10-ton General Electric Motors.

Accidents for 1902.

By referring to Tables C and D of this report, it will be seen that six persons lost their lives and sixteen were injured, some quite seriously by falls of coal and roof slate. One person lost his life and eleven others were injured by mine cars. Two were killed and five others quite severely burned by an explosion of gas, and one met his death by a blast, and one was killed, and six others were injured from miscellaneous causes inside and outside the mines. I shall endeavor to give in a brief manner a description of the fatal accidents, the cause and responsibility in each case being determined after a careful investigation of each accident as it occurred.

By Falls of Coal and Slate.

The first victim from this cause was Paul Turine who, with his partner, was driving a room in crop coal, where the roof was dangerous from clay slips. They had fired a shot in the coal and after returning Turine started to shovel the coal back, when a large stone fell upon him. The props were eight feet from the face of the room, which was twenty-one feet wide, and I concluded that the men had erred in not having more timber set up, and in not examining the roof carefully after firing the shot and before commencing to work. They had not worked as miners very long, and no doubt were somewhat ignorant of the dangers of the occupation.

On May 24th, C. J. Gustofson, a Swede trackman, and his helper were ordered by the mine foreman to replace a door on the eighth right heading which had become worthless from long use, and after removing the door from the hinges he commenced to knock out the old frame, using a hammer for the purpose, and when the frame fell, the roof above it also fell on Gustofson, killing him almost instantly, and injuring the door-boy quite seriously. The victim had been warned by the foreman regarding the dangerous condition of the roof, and he displayed poor judgment in not securing the roof above him before knocking out the only support it had. There is an object lesson in this accident, and one that should not be lost sight of, namely, that door frames should not be subjected to the weight of the roof, as it is not only dangerous, but also destroys them for the purpose for which they are intended.

Mike Loss, a Slav miner, was instantly killed in the Pleasant Hill mine. He with two of his countrymen was working in a room in which the roof was dangerous, being on the outcrop line of the seam. The roof began falling in the room, and they retreated to a place of safety, but Loss remembering that he had left something in the room, which he considered valuable, attempted to re-enter the place while it was still falling, when he was caught by the fall with the result as stated. This is what I should call foolhardiness.

On August 8th, Thomas Cauterine was instantly killed in the Clarion No. 29 drift. He with others was removing heading stumps and the roof was unusually dangerous by being crushed and broken by the weight of the overlying strata, so that the accident was unavoidable.

On October 14th an accident occurred in the Rochester mine, in which two persons were instantly killed. The victims of the accident were removing pillars with the use of the mining machine and on the morning of the accident had gone to work early, and, against orders were undercutting a triangular stump of coal, leaving no support, and when it fell, considerable roof slate came with it, re-

sulting as above stated. The noise of the machine no doubt prevented them from hearing any warning, but they certainly erred in not leaving some support, or in using sprags under the stump.

Accidents by Mine Cars.

John Kanyuk, a Slav miner, was instantly killed by a trip of loaded cars while walking on the haulage road in the London mine. The victim was employed on the night turn, and was on his way to work, but preferred traveling on the rope road, and running the chances rather than walking on the manway, which is provided for the purpose. Much has been done to prevent persons from taking such risks, but until men see the folly of such practices, just so long will accidents occur from this cause.

Accidents from Gas Explosions.

On September 23d, at about 10.30 A. M., an explosion of gas occurred in the Helvetia mine, in which Mike Fender and Fergus Bonner were fatally burned and five others were more or less severely scorched by the flames.

The victims were taken to the Adrien Hospital at Punxsutawney where they were cared for, and all survived except Fender and Bonner.

Upon learning of the accident, I left for the mine and upon my arrival, I entered the workings accompanied by Mr. Hampson, Inspector 12th district, and the mine officials. When we arrived at the scene of the explosion which occurred in the 5th west heading, in rooms Nos. 1 to 5, where pillars were being removed, the rooms having been driven to the property line, there was no evidence found that a violent explosion had taken place, but some indications of flame having charred the fine dust upon the props and pillars, but it did not extend far out the rooms, showing conclusively that but a small body of gas had been present, otherwise the loss of life would have been greater. After carefully examining all the workings in this portion of the mine, and questioning the mine officials and employes who could furnish any light upon the cause of the accident, we came to the following conclusion. 1st. That the fire boss had examined the workings on the morning of the accident, and found them clear of gas. 2d. That the gas had either accumulated at a point that could not be reached by the fire boss, or had collected when the first fall occurred after the fire boss had made his rounds, which liberated some feeders of gas from the strata overlying the coal, which when the second fall took place, forced the gas down upon the workmen's lights, causing the explosion. This ex-

plosion with others of like character in this and other regions, demonstrates without a doubt, that where coal seams are being mined at a considerable depth, too much care cannot be taken to prevent, as far as possible, accidents of this kind.

Explosion of Blasts.

A blown out shot caused the death of James McGority, in the Snow Shoe No. 5 mine, on November 28th. The victim was driving a cross-cut from his room to another, and had reached a point where he expected to cut through to the other room, but discovered that the thinnest point was in the right hand corner of the crosscut, where he bored a hole over the solid expecting to blow it through. He charged the hole, and ignited the squib and retreated to a place of safety. The shot failed to explode, and when he returned, it was thought he had found the squib partially burned and extinguished, and he again ignited it, when it exploded before he had time to escape, blowing the tamping out, striking him in the face, killing him instantly. Blasting from the solid is a dangerous practice unless great care is exercised in placing the holes, and requires some judgment in charging, but the use of shortened squibs makes the work still more hazardous.

Other Fatalities.

The handling of mine mules is very often a cause of great danger to those who do not use ordinary care in working about them. I have the unpleasant duty of recording one fatal accident from this cause during the year. The victim was a driver who had finished his day's work, and had brought his animal to the mouth of the manway, and in attempting to get on the mule's back, the animal started to run and he fell off, his foot being caught in the trace chain, in which position he was dragged for several hundred feet; he was so seriously injured that he died in a very short time after. No doubt the accident was due to the lack of care on the part of the boy.

Description of Mines for 1902.

Mines in Clearfield County.

Rochester mine was found in a reasonably good condition throughout the year. Owing to the principal headings having been cut off by a sand rock fault, the number of persons employed inside have been reduced about one-half, and the work is confined entirely to the drawing of pillars, which, with care, can be continued for some time to come.

The DuBois shaft No. 1 (formerly known as the Berwind-White shaft) is now owned and operated by the Buffalo and Susquehanna Coal and Coke Co., having been bought by the latter company during the early part of the year. The condition of the mine has been good during the entire year. The air currents were being conveyed to the face of workings in sufficient volume to keep them safe, and in a healthful condition. The distance by which mule power was used in hauling the coal to the side track was reduced about 1,000 feet, by extending the rope haulage during the year.

The Williamsport Nos. 2 and 6 mines have been operated by the owners (Buffalo and Susquehanna Coal and Coke Co.) nearly the entire year. They were formerly leased to Frank Williams & Co. The condition of the No. 2 mine for ventilation has been improved somewhat during the year but some of the headings still require more air, but unless more ventilating power is provided, no permanent improvement can be expected.

The No. 6 mine has been in a fairly good condition, the velocity of the air current in the workings had been increased which was more effectual in keeping the places clear of smoke. The company is opening a new drift a short distance east of the present openings, and into the same vein of coal.

The Helvetia slope mine has been in a very fair condition. The mine is ventilated by a 25-foot diameter Guibal fan, which produces a volume of 62,400 cubic feet of air per minute, against a water gauge of 1.8 inches, and considering the distance that the air must be conveyed to the face of the inner workings, volumes of 4,800, 7,200, 12,000, 14,000 and 25,200 cubic feet have been measured at the face of the different headings. Explosive gas is being generated in the dip workings, and much care is necessary to prevent accidents therefrom. I am informed that the company intends sinking a shaft at or near the face of the inner workings, as a ventilating and hoisting shaft, which will be a decided improvement.

The Fairmount No. 1 mine has been in a reasonably good condition. An opening was made to the surface, at the face of the inner workings for the purpose of ventilation, and great improvement was found therefrom.

Mosquito Creek.—The condition of this mine has not been satisfactory, but promises have been made to improve the ventilation and drainage, which I hope to see on my next visit.

The Meyer Run mine was in good condition. Three seams of coal are opened here, but the B seam is the only one being mined to any extent.

The Cataract mines were disposed of by the Berwind-White Coal Mining Co. during the year, having been purchased by Kelly Brothers and others. On my last visit I found the mines idle, and they had

not been operated much for some time. The conditions generally were fair.

Brittanic Mine. —This mine was in a reasonably good condition.

Mt. Carmel mine was not operated during the year, but on my last visit I found preparations being made to resume work.

Karthus mine is a new drift opening made during the year into the B seam. Two parallel openings were being driven into the seam, but had not progressed very far on my last visit. The coal will be lowered down an incline plane several hundred feet long, to the tipple.

Black Diamond mine has not been in operation during the entire year.

Penfield.—This is a new opening made into the B vein. It is located in Houston township, near the town of Penfield, and will be operated by the Penfield Coal Co. It is a drift opening, and only recently opened, and on the date of my visit, the tipple had not been built, and no other permanent work had been completed.

Clearfield No. 10.—During the greater part of the year, there were not a sufficient number of persons employed to bring it under the law. Condition of the mine for ventilation and drainage was only fair.

Belfast is a new operation, being a drift opening into the D or Lower Freeport vein. It is located in Penn township, near the town of Grampian, and is operated by Atherton & Barnes of Philipsburg. The mine is opened on the double entry plan and is ventilated by a small furnace. The roof over the seam is not good, and there was considerable trouble from clay veins or spars. The condition of the mine for ventilation and drainage was reasonably good. T. W. Gatehouse is the foreman in charge.

Raybold No. 2.—A shallow shaft which is located near the face of the workings was cleaned out and is being used for ventilation, which improved the conditions, to some extent, otherwise no improvement can be reported.

Priscilla No. 2.—This mine was formerly known as Grampian No. 1, but was purchased by the Priscilla Coal Mining Co. The mine is kept in good condition, the ventilation being sufficient for the number of persons employed, and the workings were reasonably well drained.

Penn No. 1.—The Clearfield and Grampian Coal Co. opened this mine during the year. It is a drift opening into the D or Lower Freeport vein, and ventilated by a small furnace, which was producing a volume of 12,500 cubic feet of air per minute. There is trouble from a bad roof and clay veins.

Moravian, Pleasant Hill, Grassflat and Knox Run mines are all operated by the Clearfield and Bituminous Coal Corporation and were all in good condition. In the Pleasant Hill mine, a new haulage

road was being made to obtain a lighter and more uniform grade, also to shorten the distance by about 1,600 feet. This new road runs along the 5th west heading 1,000 feet, then continuing North as far as No. 11, cutting off all the west headings. A 35 pound steel T rail was being laid preparatory to using electric motors in the near future. An opening was made at the face of the inner workings of the Knox Run No. 2 mine, which will be used as a second way of egress.

Mines in Centre County.

Sugar Camp Mines.—These mines are all operated by the Lehigh Valley Coal Co., and have been working very regularly during the entire year with a large force of miners, and the production of coal has been large. The openings known as Nos. 2, 4, 7 and 12 are fast becoming worked out, and a considerable amount of coal is being mined from pillars. There are a number of coke ovens, of the Bee Hive pattern, located at these openings, which have not been in use for several years, and in consequence were not in a condition for the manufacture of coke. I understand that the company had during the latter part of the year commenced to rebuild them, with a view of making coke in the near future. The condition of the openings for ventilation and drainage was good. The drifts Nos. 9, 10 and 11 were found in a reasonably good condition for ventilation, and the workings were well drained. Two seams of coal are being mined here and a good quality of coal is produced of both veins. No. 8 drift was worked out and abandoned during the year, and the No. 5 opening was also nearly finished on my last visit, there being only a few persons at work in removing the main heading pillars. A new opening was made during the year, known as No. 13. It is a drift mine, in the B seam and into a small piece of the territory that could not be reached by the other openings. A furnace was built which provided sufficient air for the number of persons employed.

Cato is a very small mine and employs only about eighteen persons all told. Its condition was not satisfactory.

Cherry Run.—There is nothing new to report, concerning this mine, except that it was in a somewhat improved condition, and is a very difficult mine to operate.

Snow Shoe Nos. 4 and 5.—An opening to the surface was made from the face of workings in the No. 5 mine for ventilation, which serves the purpose well, but some of the headings were still smoky and the drainage was defective. The velocity of the air current in No. 4 mine was not strong enough to carry the smoke away, and the drainage was not good.

Mines in Clinton County.

There are now two companies operating in this county, namely, the Kettle Creek Coal Mining Co., and the Clinton Coal Co. The latter company began operations in the county during the year 1901, by opening a drift mine in the B seam of coal, about one and one-half miles east of the Kettle Creek operations. Coal shipments however were not commenced until about the middle of the year 1902. The product of the mine is lowered down a long incline plane to the chutes, where a siding from the P. & E. R. R. about one mile in length runs in near the town of Westport. On my visit to the mine, I found that only a few persons were employed in driving headings. The workings were laid out on the double entry system, and an air shaft had been sunk, where a 7-foot diameter Stine fan was to be put in operation just as soon as steam could be provided for motive power. There was also one 18x26 Norwalk Air Compressor on the premises to furnish power for mining machines, which the company expect to use in mining, about the early part of 1903.

Kettle Creek Mines.—Have been kept in operation very steadily during the entire year, and have on each of my visits been found in their usual good condition. The company opened a drift mine (known as the West Side mine) in the B seam, a short distance west of their Kettle Creek mines. The mine is opened on the double entry system and a good sized furnace is in use for ventilation, which was providing a volume of 31,500 cubic feet per minute, which was being well distributed throughout the workings. The product of the mine is lowered down a long incline plane to the chutes, which is equipped with a Phillips Automatic Dump, a sprocket chain hoist to raise the empty cars up a short incline, which is operated by electricity, which is also used to light the chute and other buildings. Preparations were also being made to introduce the Puncher type of machine for mining.

Dagus No. 1.—Owing to a fire that occurred in December, 1901, which destroyed the tibble, engine and boiler rooms, the mine was idle some months during the early part of the year, but the structures were re-built more substantially than before, the engine and boiler rooms being constructed of brick, making them practically fire-proof, and the arrangements for handling coal were much improved. The condition of the mine was not changed much, and it was reasonably well ventilated and drained. A new heading was being driven through a fault lying between the Eureka slope and No. 1 for the purpose of mining out a block of coal that lies back of the fault. Much bad roof is encountered in driving this heading, but it was progressing very well.

Dagus No. 3,—A tail rope system of haulage was installed in this

mine during the year, thereby dispensing with considerable mule power. The working force was increased during the time the No. 1 mine was idle, and in consequence, some parts of the mine were not as well ventilated as the circumstances required. I am, however, informed that a larger fan will soon be installed.

Eureka Slope.—This mine was reasonably well ventilated and drained, and was well looked after generally.

Clarion No. 4.—The No. 27 drift was found in good condition. The ventilation was sufficient to keep the workings healthful. The No. 29 drift was also in a good condition generally.

Shawmut No. 1.—But a few persons were employed in this mine, and they are removing the main heading pillars, which will soon be completed. Sufficient air was provided.

Shawmut No. 5.—The condition of this mine is steadily being improved. A new drift opening that was commenced in the early part of the year will soon be connected to the old part of the mine, which will cut off the low haulage road now in use, and will serve as a shorter and more direct route for air to the solid part of the field.

Shawmut No. 6 is being well looked after; the ventilation is being well conveyed to the inner workings, which are also very well drained. Electric motors have been in use nearly the entire year, in hauling coal to the foot of the slope.

Shawmut No. 8.—The main headings were stopped for several months, with a view of leaving that portion of the field to be mined from the No. 6 mine, but this idea was abandoned, and they are again being driven. The mine is in its usual good condition generally.

Shawmut No. 9.—This mine continues to be operated with only a few persons inside, and is well supplied with ventilation.

Shawmut No. 10.—Was in very fair condition for ventilation and drainage.

Mead Run No. 2.—Was not in operation and I understand has been abandoned.

Mead Run No. 4.—The solid coal in this mine has about all been developed, and the greater portion of the production is being taken from pillars. Its condition for ventilation and drainage is fair.

Hazel Dell.—Only about twenty persons are employed, but the mine is kept in good condition.

Kaul mine is a new opening made during the year, by the St. Mary's Sewer Pipe Co. Coal and fire clay are both mined, and a sufficient number of persons are employed at mining coal to bring it under the provisions of the law. A furnace is used to ventilate, and I found the mine in good condition.

Byrne No. 21.—This mine has got to be quite an extensive one, with a large daily production. The main No. 1 headings have been

driven through to the Caledonia side of the field, where another new drift has been opened, and headings are being driven to connect with the Elk No. 31 mine. At this point there is also a boiler plant, together with an air compressing plant, that will provide power for mining machines of the Puncher type. The ventilation is by furnaces, but the ventilation is not sufficient to meet the requirements, and I am opposed to the use of machines for mining unless a greater volume of air is provided. I have notified the officials of my opinion on this subject, and I am informed that a large Capell fan has been ordered, and will be installed as soon as received.

Elk No. 31.—The workings of this mine cover a large area, and the furnace in use does not provide the volume of air at face of workings that is necessary to keep them in a good condition. When this mine is connected with the Bryne mine, they intend ventilating both openings with one fan.

Cardiff No. 41.—The furnaces at these openings do not provide sufficient air, but I am informed that a fan has been ordered. The mine is well looked after, and the conditions generally are very good, and it only requires more ventilating power.

Mines in Jefferson County.

London.—Much work has been done during the year, preparing for electric haulage, from the several headings to the side track inside the mine, from which point the coal will be brought to the surface by rope haulage. This is a very large mine, and has been operated very steadily with a large daily production, during the entire year. Its condition for ventilation and drainage is reasonably good.

Pancoast was worked out and abandoned in the early part of the year.

West Clarion Mines.—Some local defects were found in ventilation in the No. 1 drift. A tunnel was driven in the 4th left heading from the upper to the lower vein, which was developed to some extent, but its condition at this point is not very promising. The No. 3 drift was in good condition. The main headings in No. 6 opening was driven through the hill, which serves as a second opening, and a drainage point for the entire mine. There is a good volume of air provided, and the openings generally are well looked after.

Brock.—This mine is now owned and operated by the Iroquois Coal Co., having been bought from Joseph H. Reilly & Co. in the month of October. The mine is in a reasonably good condition.

Rattlesnake Run.—The No. 2 drift has been driven through the hill, and an opening continued into the adjoining hill, to mine out this part of the field. The No. 1 opening is fast becoming worked

out, the work being confined to pillar drawing. No complaints can be made as to the condition of the mine.

Coal Glen Mines.—These openings are all ventilated by fans of the Clark type, and the motive power used is gasoline and compressed air, both of which seem to give the officials considerable annoyance and trouble in endeavoring to keep the fans in constant operation while the workmen are in the mine, and unless air currents are kept traveling continuously through the workings they fail to be effective in keeping the mine clear of smoke. The condition of the mines generally is very fair, except the opening known as Klondyke, which is insufficiently ventilated, but some changes were being made on my last visit, which I hope will improve the ventilation.

Beechtree No. 2.—This mine continues to be operated with but a few men and is supplied with sufficient air.

Mines in Lycoming County.

Red Run Mines... These mines have been in operation almost the entire year. Another drift has been opened during the year known as No. 8, and the headings have been pushed forward rapidly, and on my last visit I found a good many persons were employed therein. The No. 2 opening is being worked out fast, but the No. 7 drift has considerable coal yet to be developed. All the openings are reasonably well ventilated and drained.

Mines in McKean County.

The Lyman mine is the only one in this county, that comes under the provisions of the law, and it is only a small operation, employing very few persons. Its condition for ventilation and drainage has been good at each visit. A second opening was made to comply with the law during the year.

Mines in Tioga County.

The Blossburg Coal Co. operate six mines in this county, namely, the Nos. 1, 2, 3, 5, 7, and Bear Run, also Maple Hill. They have all been kept in operation very steadily during the entire year. The furnace shaft in the No. 1 mine was enlarged and a new stack built, which has improved the ventilation very much, but the shaft is too shallow to insure good results. In the No. 2 mine an air shaft about 60 feet deep was sunk at the face of the 5th left heading, and a furnace built at the bottom of same, which is a decided improvement

in the ventilation. The condition of the Nos. 3 and 5 mine has been found good on each visit. The vein in the No. 7 drift is low, and contains much refuse, requiring much powder in blasting, which necessitates a large volume of air to keep the workings clear of smoke. The mine, however, is in a very fair condition. In the Bear Run mine an air shaft was sunk, at the face of the main heading, which serves as an inlet to that portion of the mine. The mine now is in good condition generally. The Maple Hill mine has been idle all the year.

The Morris Run Coal Mining Co. operates two mines in the county, the Jones No. 1 and New mine No. 2. In the Jones mine, electric motors have been in use for several months, in that portion of the mine, known as the Campbelltown heading. Some changes in the ventilation are being made which when completed will be a decided improvement. In the No. 2 mine an air shaft is being sunk to the face of the No. 12 east heading, on the North Side, where a furnace will be located to ventilate the mine. The old or present furnace is too far from the present workings and does not give good results.

Schultz mine is a drift opening into the Blossburg seam of coal, and is operated by Charles Schultz. A sufficient number of persons were employed to bring it under the law. The mine is ventilated by a small furnace, and the condition of the mine was reasonably good.

Magee & Ellsworth operates three mines in this county. The Antrim Nos. 1 and 2, also Anna "S" mine. In the No. 1 mine the work is confined almost wholly to pillar drawing, and the gob portion of the mine gives off considerable gas and the fan acting as an exhaust brought this gas into the workings. The direction of the air current, however, was changed, with the effect of compressing this gas back into the gob, leaving the atmosphere of the mine in a much more healthful condition. The No. 5 mine was in fair condition; it has been in operation many years, and is difficult to ventilate. The Anna "S" mine was re-opened during the year 1901, and has been operated very steadily ever since. The mine is ventilated by a fan which is producing a good volume of air, which was being conveyed in several splits to the several headings, but the velocity of the current in some entries was too sluggish to be effective. Much of the coal in this mine, is mined by machines of the Puncher type.

Mines in Bradford County.

Long Valley No. 3 has been abandoned since the beginning of the year.

TABLE 1—Showing names of operators, railroads, etc., and location of collieries in the Fourth Bituminous District for the year 1902.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
North West Mining and Exchange Co.						
Daguer No. 1.	Elk.	Joseph Bailey.	Brockwayville.	Joseph Bailey.	Brockwayville.	Erie R. R.
Daguer No. 3.	Elk.	Joseph Bailey.	Brockwayville.	Joseph Bailey.	Brockwayville.	Erie R. R.
Enoka Slope.	Elk.	Joseph Bailey.	Brockwayville.	Joseph Bailey.	Brockwayville.	Erie R. R.
Chardon Nos. 27 and 29.	Elk.	Joseph Bailey.	Brockwayville.	Joseph Bailey.	Brockwayville.	Erie R. R.
West Clarion Nos. 1, 3 and 6.	Jefferson.	Joseph Bailey.	Brockwayville.	Joseph Bailey.	Brockwayville.	R. & C. Branch, P. R. R.
Rattlesnake Run.	Jefferson.	Joseph Bailey.	Brockwayville.	Joseph Bailey.	Brockwayville.	R. & C. Branch, P. R. R.
Jefferson-Clearfield Coal and Iron Co.						
Rockbuster.	Clearfield.	L. W. Robinson.	Punkstutawney.	John Reed.	Reynoldsville.	R. & F. C. Branch, B. R. & P.
London.	Jefferson.	L. W. Robinson.	Punkstutawney.	John Reed.	Reynoldsville.	R. & F. C. Branch, B. R. & P.
Clearfield Bituminous Coal Corporation.						
Grass Flat.	Clearfield.	R. A. Shillingford.	Clearfield.	James Adamson.	Peale.	N. Y. C. & H. R. R. R.
Knox Run.	Clearfield.	R. A. Shillingford.	Clearfield.	Andrew Frendberg.	Peale.	N. Y. C. & H. R. R. R.
Plaisant Hill.	Clearfield.	R. A. Shillingford.	Clearfield.	S. R. Green.	Peale.	N. Y. C. & H. R. R. R.
Maravian.	Clearfield.	R. A. Shillingford.	Clearfield.	William Fleming.	Peale.	N. Y. C. & H. R. R. R.
Shawmut Mining Co.						
Shawmut No. 1.	Elk.	George S. Ramsey.	St. Marys.	Arthur White.	Shawmut.	Pittsburg, Shawmut & Northern
Shawmut No. 2.	Elk.	George S. Ramsey.	St. Marys.	Arthur White.	Shawmut.	Pittsburg, Shawmut & Northern
Shawmut No. 3.	Elk.	George S. Ramsey.	St. Marys.	Arthur White.	Shawmut.	Pittsburg, Shawmut & Northern
Shawmut No. 4.	Elk.	George S. Ramsey.	St. Marys.	Arthur White.	Shawmut.	Pittsburg, Shawmut & Northern
Shawmut No. 5.	Elk.	George S. Ramsey.	St. Marys.	Arthur White.	Shawmut.	Pittsburg, Shawmut & Northern
Shawmut No. 6.	Elk.	George S. Ramsey.	St. Marys.	Arthur White.	Shawmut.	Pittsburg, Shawmut & Northern
Shawmut No. 7.	Elk.	George S. Ramsey.	St. Marys.	Arthur White.	Shawmut.	Pittsburg, Shawmut & Northern
Shawmut No. 8.	Elk.	George S. Ramsey.	St. Marys.	Arthur White.	Shawmut.	Pittsburg, Shawmut & Northern
Shawmut No. 9.	Elk.	George S. Ramsey.	St. Marys.	Arthur White.	Shawmut.	Pittsburg, Shawmut & Northern
Shawmut No. 10.	Elk.	George S. Ramsey.	St. Marys.	Arthur White.	Shawmut.	Pittsburg, Shawmut & Northern
Shawmut No. 11.	Elk.	George S. Ramsey.	St. Marys.	Arthur White.	Shawmut.	Pittsburg, Shawmut & Northern
Shawmut No. 12.	Elk.	George S. Ramsey.	St. Marys.	Arthur White.	Shawmut.	Pittsburg, Shawmut & Northern
Shawmut No. 13.	Elk.	George S. Ramsey.	St. Marys.	Arthur White.	Shawmut.	Pittsburg, Shawmut & Northern
Shawmut No. 14.	Elk.	George S. Ramsey.	St. Marys.	Arthur White.	Shawmut.	Pittsburg, Shawmut & Northern
Lehigh Valley Coal Co.						
Sugar Camp No. 1.	Centre.	S. D. Warriner.	Wilkes-Barre.	W. C. Snyder.	Snow Shoe.	Pennsylvania R. R.
Sugar Camp No. 2.	Centre.	S. D. Warriner.	Wilkes-Barre.	W. C. Snyder.	Snow Shoe.	Pennsylvania R. R.
Sugar Camp No. 3.	Centre.	S. D. Warriner.	Wilkes-Barre.	W. C. Snyder.	Snow Shoe.	Pennsylvania R. R.
Sugar Camp No. 4.	Centre.	S. D. Warriner.	Wilkes-Barre.	W. C. Snyder.	Snow Shoe.	Pennsylvania R. R.
Sugar Camp No. 5.	Centre.	S. D. Warriner.	Wilkes-Barre.	W. C. Snyder.	Snow Shoe.	Pennsylvania R. R.
Sugar Camp No. 6.	Centre.	S. D. Warriner.	Wilkes-Barre.	W. C. Snyder.	Snow Shoe.	Pennsylvania R. R.
Sugar Camp No. 7.	Centre.	S. D. Warriner.	Wilkes-Barre.	W. C. Snyder.	Snow Shoe.	Pennsylvania R. R.
Sugar Camp No. 8.	Centre.	S. D. Warriner.	Wilkes-Barre.	W. C. Snyder.	Snow Shoe.	Pennsylvania R. R.
Sugar Camp No. 9.	Centre.	S. D. Warriner.	Wilkes-Barre.	W. C. Snyder.	Snow Shoe.	Pennsylvania R. R.
Sugar Camp No. 10.	Centre.	S. D. Warriner.	Wilkes-Barre.	W. C. Snyder.	Snow Shoe.	Pennsylvania R. R.
Sugar Camp No. 11.	Centre.	S. D. Warriner.	Wilkes-Barre.	W. C. Snyder.	Snow Shoe.	Pennsylvania R. R.
Sugar Camp No. 12.	Centre.	S. D. Warriner.	Wilkes-Barre.	W. C. Snyder.	Snow Shoe.	Pennsylvania R. R.
Sugar Camp No. 13.	Centre.	S. D. Warriner.	Wilkes-Barre.	W. C. Snyder.	Snow Shoe.	Pennsylvania R. R.
Sugar Camp No. 14.	Centre.	S. D. Warriner.	Wilkes-Barre.	W. C. Snyder.	Snow Shoe.	Pennsylvania R. R.

Blissburg Coal Co.	Tioga,	Joseph Bailey, ...	Arnot,	Joseph Bailey,	Arnot,	Tioga Div., Erie R. R.
Arnot No. 1,						
Arnot No. 2,						
Arnot Nos. 3 and 5,						
Arnot No. 7,						
Bear Run,						
Maple Hill,						
Buffalo and Susquehanna Coal and Coke Co.						
Du Bois shaft No. 1,	Clearfield,	F. B. Lincoln, ...	DuBois,	Chas. P. Munch, ...	DuBois,	Low Grade Div., Buffalo and Allegheny Valley.
Westport No. 2,	Clearfield,	F. B. Lincoln, ...	DuBois,	Jas. E. Dunsmore, ...	Tyler,	
Westport No. 6,						
Morris Run Coal Mining Co.	Tioga,	W. S. Nearing, ...	Morris Run,	W. S. Nearing,	Morris Run,	N. Y. C. & H. R. R. R.
James No. 1,						
New Mine No. 2,						
Magee & Ellsworth.						
Antrim No. 1,	Tioga,	William Howell, ...	Corning, N. Y., ...	James Pollock, ...	Antrim,	N. Y. C. & H. R. R. R.
Antrim No. 5,						
Anna 'S',						
Kettle Creek Coal Mining Co.	Clinton,	George L. Miller, ...	Bitumin,	James Ward,	Bitumin,	S. & B. R. R. R.
Kettle Creek No. 1,	Clinton,	George L. Miller, ...	Bitumin,	James Ward,	Bitumin,	S. & B. R. R. R.
Kettle Creek Nos. 2 and 3,	Clinton,	George L. Miller, ...	Bitumin,	James T. Ward, ...	Bitumin,	S. & B. R. R. R.
West Side,						
Red Run Coal Co.	Lycemg,	D. E. Allison,	Roaring Branch, ...	D. B. Allison,	Roaring Branch, ..	Northern Central R. R.
Red Run No. 2,						
Red Run No. 7,						
Red Run No. 8,						
Iroquois Coal Co.	Jefferson,			Joel Tompkins,	Brockwayville, ...	Pennsylvania R. R.
Brook,						
R. and P. Coal and Iron Co.	Clearfield,	L. W. Robinson, ...	Punxsutawney, ...	T. S. Lowther,	Helvetia,	Buffalo, Roch. & Pittsburg.
Helvetia No. 2,						
Kersey Coal and Coke Co.	Elk,	George S. Ramsey, ...	St. Marys,	J. B. Hanford,	Byrnedale,	Pittsb'g, Shawmut & Northern.
Byrne No. 21,						
Elk No. 31,						
Cardiff No. 41,						
Hail & Kaul.	Elk,	Andrew Kaul,	St. Marys,			Pittsb'g, Shawmut & Northern.
Hazel Dell,						
Harbison Walker Co.	Clearfield,	H. H. Erritt,	Woodland,	John M. Baker, ...	Woodland,	Pennsylvania R. R.
Fairmount No. 1,						
Mathew Shadeck.	Clearfield,			Mathew Shadeck, ..	Karhaus,	West Branch Valley Div., N. Y. C. & H. R. R. R.
Mosquito Creek,						
Jefferson Coal Co.	Jefferson,	Austin Blakslee, ...	Coal Glen,	Austin Blakslee, ...	Coal Glen,	B. R. & P. R. R.
Coal Glen Nos. 1 and 2,						
Coal Glen No. 3,						

TABLE I—Continued

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Clearfield and Gramplan Coal Co.	Clearfield.	M. Burns.	Brisben,	Chas. E. Potter,...	Gramplan,	Pennsylvania R. R.
Rayfield No. 2.	Clearfield.	M. Burns.	Brisben,	E. M. Wilson,....	Gramplan,	Pennsylvania R. R.
Cherry Run.	Centre.	W. F. Holt,	Phillipsburg, ...	W. F. Holt,	Phillipsburg, ...	Pennsylvania R. R.
Kelly Brothers.	Centre.	M. D. Kelly,	Snow Shoe,	H. P. Kelly,	Snow Shoe,	Pennsylvania R. R.
Snow Shoe No. 1.	Centre.	M. D. Kelly,	Snow Shoe,	H. P. Kelly,	Snow Shoe,	Pennsylvania R. R.
Catawac.	Clearfield.	Lawrence Redding,	Snow Shoe, .....	.....	.....	West Branch Valley Division, N. Y. C. & H. R. R. R.
Kelly & Nugent.	Centre.	.....	.....	L. Nugent,	Snow Shoe,	N. Y. C. & H. R. R. R.
Atherton & Barnes.	Clearfield.	.....	.....	T. W. Gatehouse,...	Gramplan,	Pennsylvania R. R.
Balfast.	Clearfield.	.....	.....	.....	.....	.....
Priscilla Coal Mining Co.	Clearfield.	D. W. Luke,	South Fork,	R. W. Luke,	Gramplan,	Pennsylvania R. R.
Clinton Coal Co.	Clinton	A. N. Blandin, ...	Bath, N. H.,.....	C. F. Schippen,....	Westport,	Pennsylvania R. R., P. & E. Div.
St. Mary's Sewer Pipe Co.	Elk.	D. B. Anderson, ...	St. Marys,	Martin Dippold,...	St. Mary's,	P. S. & N. R. R.
Kaul mine.	.....	.....	.....	.....	.....	.....
J. F. Keating	McKean.	J. F. Keating,	Clermont,	James Maloney, ...	Clermont,	W. N. Y. & P. R. R.
Lyman mine.	.....	.....	.....	.....	.....	.....
Isaac Stage.	Clearfield.	.....	.....	Isaac Stage,	Clearfield.	.....
Charles Schultz	.....	.....	.....	.....	.....	.....
Schultz mine.	Toga.	.....	.....	Chas. Schultz,	Blossburg.	.....
A. G. Spears.	Clearfield.	.....	.....	H. G. Spears,	Karthauss,	West Branch Valley Division, N. Y. C. & H. R. R. R.
Mayer Run.	.....	.....	.....	.....	.....	.....
George Ross & Co.	Clearfield.	.....	.....	George Ites,	Karthauss,	West Branch Valley Division, N. Y. C. & H. R. R. R.
Brittanic mine.	Clearfield.	.....	.....	.....	.....	.....

TABLE II—Gives the total number of tons of coal mined and tons of coke produced in each colliery, number of days worked, number of employees, number of employees killed and injured, number of kegs of powder, etc., used in the Fourth Bituminous District for the year ending December 31, 1902.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Total production of coke in tons.	Number of coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Northwestern Mining & Ex. Co.														
Dagus No. 1,	Elk,	346,926	4,685	2,026	353,637	.....	.....	293.5	554	.....	3	2,008	3,050	45
Eureka slope,	Elk, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Clarion No. 27,	Elk,	186,395	348	1,475	188,218	.....	.....	249.1	257	1	.....	1,700	140	38
Clarion No. 28,	Elk, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
West Clarion No. 1,	Jefferson,	182,443	1,192	273	183,908	.....	.....	257.5	217	.....	1	1,349	810	25
West Clarion No. 3,	Jefferson, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
West Clarion No. 6,	Jefferson,	92,563	1	39	92,603	.....	.....	251.3	116	.....	.....	660	240	5
Rattlesnake Run,	Jefferson, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals, .....	.....	808,327	6,226	3,813	818,366	.....	.....	252.8	1,144	1	4	5,717	4,240	113
Clearfield Bituminous Coal Corporation.														
Grassflat,	Clearfield,	111,421	913	742	205,557	57,338	.....	286	285	.....	.....	2,010	1,000	25
Knox Run,	Clearfield,	157,906	.....	161	159,057	614	150	283	223	1	2	2,700	950	18
Pleasant Hill,	Clearfield,	179,166	.....	1,534	181,714	628	.....	280	229	1	.....	1,600	200	18
Moravian,	Clearfield,	147,004	.....	63	148,851	1,108	.....	283	183	.....	.....	2,150	1,000	14
Totals, .....	.....	585,497	913	2,500	685,182	59,688	150	283	920	2	2	8,460	3,150	75
Jefferson and Clearfield Coal and Iron Co.														
Rochester,	Clearfield,	213,751	.....	.....	213,751	.....	.....	257.5	253	2	.....	.....	.....	15

*Totals in this column are averages.

TABLE II—Continued.

Names of Operators and Collieries.		County.		Shipments of coal in tons by												Number of tons used for steam and heat at colliery.		Sold to local trade and used by employees—tons.		Total production of coal in tons.		Total production of coke in tons.		Number of coke ovens.		Number days worked.		Number persons employed.		Number fatal accidents.		Number non-fatal accidents.		Number kegs powder used.		Number pounds of dynamite used.		Number horses and mules.			
				London.		Jefferson.																																			
				Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.	
				Kettle Creek Coal Mining Co.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.	
				West Side No. 1.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.	
				West Side No. 2.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.	
				Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.	
				Blossburg Coal Co.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.	
				Arnet No. 1.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.	
				Arnet No. 2.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.	
				Arnet No. 3.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.	
				Arnet No. 4.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.	
				Arnet No. 5.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.	
				Arnet No. 6.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.	
				Arnet No. 7.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.	
				Bear Run.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.	
				Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.	
				Magee & Ellsworth.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.	
				Antrim No. 1.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.	
				Antrim No. 2.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.	
				Anna "S."		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.		Toga.	
				Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.		Totals.	

*Totals in this column are averages.

Shawmut Mining Co.																
Shawmut No. 1.	Elk.....	28,865	17	3,676	32,558				236.3	33				230		4
Shawmut No. 5.	Elk.....	92,265	2,964	570	95,819				235.6	102				370		128
Shawmut No. 6.	Elk.....	86,033	3,130		89,163				235.6	100				360		
Shawmut No. 8.	Elk.....	168,223	4,947	897	174,067				253	231				590		
Mead Run No. 4.	Elk.....	68,697	201	91	68,899				242.1	89				269		17
Totals,		444,013	11,239	5,221	469,566				241.1	555				1,700		21
Kelly Brothers.																
Snow Shoe Nos. 4 and 5.	Centre.....	80,000	150	2,000	82,150				282	169				950		8
Catawba,	Clearfield.....	30,063	115	75	30,259				179	51				381		7
Totals,		110,063	265	2,075	112,409				230.5	220				1,331		15
Morris Run Coal Mining Co.																
Jones Mine No. 1.	Tioga.....	356,669	2,500	4,458	363,618				282.1	658						96
New Mine No. 2.	Tioga.....								284.3	144						
Totals,		356,669	2,500	4,458	363,618				283.2	802						96
Jefferson Coal Co.																
Coal Glen No. 1.	Jefferson.....	273,000	1,200	1,400	275,600				258	332				2,400		28
Coal Glen No. 2.	Jefferson.....															
Beechtree No. 2.	Jefferson.....															
Rochester and Pittsburgh Coal and Iron Co.																
Helvetia,	Clearfield.....	185,457	13,600	1,144	226,468				259	265				1,110		37
Brock,	Jefferson.....	110,356	1,379	529	112,264				250.3	206				900		3
Lehigh Valley Coal Co.																
Sugar Camp No. 2.	Centre.....	362,274	700	1,254	364,258				246.9	324				32		26
Sugar Camp No. 3.	Centre.....	130,241	157	96	130,594				131.2	95				3		6
Sugar Camp No. 13.	Centre.....	15,367	55		16,022				156.6	27				5		3
Totals,		488,582	942	1,350	440,874				178.2	446				40		35
Buffalo and Susquehanna Coal and Coke Co.																
DuBois shaft No. 1.	Clearfield.....	280,263	20,000	962	281,585				284	327				1,740		20
Williamsport Nos. 2 and 6.	Clearfield.....	98,397	2,873	1,073	157,536				269.5	287				875		21
Totals,		358,660	22,873	2,035	439,121				281.7	614				2,615		41
Kersey Coal and Coke Co.																
Byrne No. 21.	Elk.....	125,424	1,587	1,211	161,447				275.3	354				2,030		22

*Totals in this column are averages.

TABLE II—Continued.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.										Number of tons used for steam and heat at colliery.	Sold to local trade and used by employes—tons.	Total production of coal in tons.	Total production of coke in tons.	Number of coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Elk No. 21.	Elk.	73,824	115	231	54,170																		18
Cardiff No. 41.	Elk.	150,949	474	353	151,826																		22
Totals.		224,773	2,176	1,795	357,473	23,754	50	267.8	857														72
Red Run Coal Co.	Lycoming.	109,840	1,320	1,160	112,320																		4
Clearfield and Grampian Coal Co.	Clearfield.	32,384			32,384																		4
Rayhold No. 2.	Clearfield.	19,550			19,550																		3
Penn No. 3.	Clearfield.	51,934			51,934																		7
Totals.		204,558			204,558																		18
Atherton & Barnes.	Clearfield.	2,251			2,251																		4
Belfast.	Clearfield.																						
Priscilla Coal Mining Co.	Clearfield.	12,609		150	12,759																		1
Priscilla No. 2.	Clearfield.																						
Harbison Walker Co.	Clearfield.	20,250	40		20,290																		3
Fairmount No. 1.	Clearfield.																						
Clinton Coal Co.	Clinton.	4,375	50	75	4,500																		13
Clinton mine.	Clinton.																						
Mathew Shadeek.	Clearfield.	19,200	104	24	19,328																		2
Mosquito Creek.	Clearfield.																						

*Totals in this column are averages.

St. Marys' Sewer Pipe Co.	Elk.....	20,840	20,840	.....	299	63	.....	460	.....	4
Kaul Mine, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
J. F. Keating,	6,694	.....	551	7,245	273	18	.....	25	750	2
Lyman, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kelly & Nugent,	11,013	.....	100	11,113	271	25	.....	112	.....	3
Cato, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Isaac Stage,	400	.....	12,291	12,691	290	27	.....	250	.....	2
Clearfield No. 10, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Charles Schultz,	10,574	.....	184	10,758	263	24	.....	196	100	2
Schultz mine, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
A. G. Spears,	18,923	.....	.....	18,923	232	35	.....	100	.....	5
Meyer Run, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hall & Kaul, .....	.....	40	14,141	14,181	264	28	.....	.....	.....	3
Hazel Dell, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
George Rees & Co,	6,000	.....	.....	6,000	119	34	.....	.....	.....	3
Brittanb, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals,	6,468,593	89,680	59,190	6,418,840	552	241.3	9,674	34,335	26,719	786

*Totals in this column are averages.

TABLE II—Continued.

Names of Operators and Collieries.	County.	Number of Boilers.			Locomotives.			Total horse power.	Number steam engines of all classes.			Total horse power.	Number pumps delivering water to surface.	Capacity in gallons per minute.	Quantity delivered to surface per minute—gallons.	Number electric dynamos.	Number air compressors.
		Cylindrical.	Horse power.	Tubular.	Horse power.	Steam.	Air.		Electric.								
Northwestern Mining and Ex. Co.,	Elk and Jeff.	4	70	8	900	970	2			10	835						
Clearfield Bituminous Coal Corporation,	Clearfield,			3	160	180				2	125						
Jefferson-Clearfield Coal and Iron Co.,	Clearfield & Jeff.			22	2,330	2,330				2	400		4	14,000			
Kettle Creek Coal Mining Co.,	Clinton,			1	30	30											
Blossburg Coal Co.,	Tioga,			5	250	600	3			7	600						
Mascoe & Ellsworth,	Tioga,	6	310			310					250						
Shawmut Mining Co.,	Elk,	10	1,350			1,350	1			11	1,380		6	4,700	2,350	1	
Kelly Brothers,	Centre & Clear,																
Morris Run Coal Mining Co.,	Tioga,			6	550	550				9	780						
Jefferson Coal Co.,	Jefferson,			1	200	200	3	1		3	75		6				
Rochester and Pittsburg Coal and Iron Co.,	Clearfield,			12	1,400	1,400				4	330		4	6,218	3,838		
Iroquois Coal Co.,	Jefferson,			1	200	200				2	113						
Lehigh Valley Coal Co.,	Centre,		40		80	120	2			2	180		1				
Buffalo and Susquehanna Coal and Coke Co.,	Clearfield,	1		16	1,738	1,738	2			13	1,679		3	8,000	3,000	1	2
Red Run Coal Co.,	Lycoming,			4	210	260				3	325						
Clearfield and Grampian Coal Co.,	Clearfield,																
Atherton & Barnes,	Clearfield,																
Frisella Coal Mining Co.,	Clearfield,																
Harbison Walker Co.,	Clinton,			7			1			1							
Clinton Coal Co.,	Clearfield,																
Mathew Shadeck,	Elk,																
St. Marys' Sewer Pipe Co.,	Elk,																
J. F. Keating,	Elk,			5	680	680	2			1	250						2
Kersey Coal and Coke Co.,	Centre,																
Kelly & Nugent,	Clearfield,																
Isaac Stage,	Tioga,																
Charles Schultz,	Clearfield,																
A. G. Spears,	Elk,																
Hall & Kaul,	Clearfield,																
George Ross & Co.,	Clearfield,																
Totals,		11	420	96	10,128	10,918	16	1	26	77	7,322	24	32,918	9,188	17	12	

TABLE III.—Showing the number of each class of employees at each colliery in the Fourth Bituminous District during the year 1902.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.										Grand total, inside and outside.	
		Mine foremen.	Assistant mine foremen.	Fire bosses.	Miners.	Machine runners.	Machine loaders.	Machine scrapers.	Drivers and runners.	Door-boys and helpers.	Company men.	All other employees.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	Coke employees.	Book-keepers and clerks.	All other employees.	Total outside.		
North Western Mining and Exchange Co.	Elk.	3	2	...	414	...	...	...	27	2	...	21	469	1	1	17	7	...	5	...	85	554
Dagus Nos. 1 and 3, and Eureka Clarion No. 4.	Elk.	1	1	...	163	3	27	...	23	4	225	...	1	5	2	...	3	...	21	32	257
West Clarion Nos. 1, 3 and 6.	Jefferson.	1	1	...	55	7	95	...	19	12	197	...	1	4	1	...	2	...	12	20	217
Rattlesnake Run.	Jefferson.	1	98	6	3	108	1	2	...	5	8	116
Totals.		6	4	...	730	10	122	10	75	2	...	40	999	1	3	27	10	...	12	92	145	1,144	
Clearfield Bituminous Coal Corp.	Clearfield.	1	...	...	229	...	...	...	14	5	8	7	255	...	1	3	3	...	1	22	30	285
Grass Flat.	Clearfield.	1	...	...	175	...	...	...	7	...	8	6	202	...	...	2	...	...	...	19	21	223
Knox Run.	Clearfield.	1	...	...	190	...	...	...	12	4	8	1	216	...	...	2	...	...	1	10	13	229
Pleasant Hill.	Clearfield.	1	...	...	150	...	...	...	9	5	6	1	172	...	...	2	...	...	1	8	11	183
Moravian.	Clearfield.	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals.		4	...	...	735	...	...	...	42	19	30	15	845	...	1	9	3	...	3	59	75	920
Jefferson-Clearfield Coal	Jefferson.	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rochester.	Clearfield.	1	...	...	147	...	...	...	10	2	6	20	186	1	...	3	9	...	...	54	67	253
London.	Jefferson.	1	...	...	364	...	...	...	30	6	12	21	434	...	...	3	9	...	...	20	42	476
Totals.		2	...	...	511	...	...	...	40	8	18	41	620	1	...	6	18	...	...	84	109	729
Kettle Creek Coal Mining Co.	Clinton.	1	...	...	240	...	...	...	18	8	10	...	237	1	1	3	1	...	1	30	37	274
Kettle Creek No. 1.	Clinton.	1	...	...	105	...	...	...	5	1	3	...	115	...	...	1	...	...	...	9	10	125
West Side No. 2.	Clinton.	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals.		2	...	...	305	...	...	...	23	9	13	...	352	1	1	4	1	...	1	39	47	399

TABLE III—Continued.

Names or Operators and Collieries.	County.	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.							Grand total, inside and outside.			
		Mine foremen.	Assistant mine foremen.	Fire bosses.	Miners.	Machine runners.	Machine loaders.	Machine scrapers.	Drivers and runners.	Door-boys and helpers.	Company men.	All other employees.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	Coke employees.		Book-keepers and clerks.	All other employees.	Total outside.
Blossburg Coal Co.																						
Arnot No. 1.	Tioga.	1			103				6	4		6	120		1	2	2			19	24	144
Arnot No. 2.	Tioga.				127				16	9		8	161									161
Arnot No. 3.	Tioga.	1			132				10	2		4	130									130
Arnot No. 5.	Tioga.	1			124				13	7		6	160		1	6	6			29	42	202
Arnot No. 7.	Tioga.	1			155				6	5		5	148									148
Bear Run.	Tioga.	1	1		155				2	2		10	169	1		2	5		4	17	29	188
Totals.		6	2		759				51	29		39	886	1	2	10	13		4	65	95	981
Magae & Ellsworth.																						
Antrim No. 1.	Tioga.	1			46				3	1		1	52		1	2	2		1	12	18	70
Antrim No. 2.	Tioga.	1			87	6	32	6	10	3	1	6	152		1	4	3		1	32	41	153
Antrim No. 3.	Tioga.	1			67	4	18	4	6	1	2	3	106		1	3	2		1	18	25	131
Totals.		3			200	10	50	10	19	5	3	10	310		3	9	7		3	62	84	394
Shawmut Mining Co.																						
Shawmut No. 1.	Elk.	1			25				2		1		29			1				3	4	33
Shawmut No. 5.	Elk.	1			75	4	30	4		2		3	89			2	2			19	23	192
Shawmut No. 6.	Elk.	1			25	1	45	4		1	1	3	84			2	3			11	16	100
Shawmut No. 8.	Elk.	1			90	6	80	6		1		11	195			3	4			29	38	231
Mead Run No. 4.	Elk.	1			65				9	1		3	179			1	2			7	10	89
Totals.		5			240	14	155	14	11	5	2	20	466			9	11			69	89	555
Kersey Coal and Coke Co.																						
Byrne No. 21.	Elk.	1	1		125	12	50	12	20	4	20		275	1	1	5	7	32	3	30	79	354

Elk No. 31,	1	1	120	.....	.....	.....	11	.....	6	148	1	.....	2	.....	.....	7	10	168
Cardiff No. 41,	1	1	275	.....	.....	.....	19	.....	10	309	1	.....	3	2	.....	30	36	345
Totals,	3	2	520	12	80	12	50	7	36	732	3	1	10	9	32	3	67	887
Buffalo and Sunquehanna Coal Du Bois shaft No. 1,	1	.....	2	20	195	20	12	9	14	4	237	1	1	4	8	2	14	327
Williamsport No. 2 and 6,	1	1	200	.....	.....	.....	15	6	5	1	229	1	.....	4	7	30	1	287
Totals,	2	1	220	20	195	20	27	15	19	5	526	2	1	8	15	30	3	614
Kelly Brothers, Snow Shoe Nos. 4 and 5,	2	.....	140	.....	.....	.....	7	1	2	8	161	1	1	1	.....	3	2	163
Catact,	1	.....	33	.....	.....	.....	3	.....	2	45	1	.....	1	.....	.....	2	6	51
Totals,	3	.....	179	.....	.....	.....	10	1	5	8	206	2	1	2	.....	5	4	220
Red Run Coal Co. Red Run Nos. 2, 7 and 8,	1	1	161	.....	.....	.....	4	2	.....	6	175	1	.....	4	2	.....	31	215
Morris Run Coal Mining Co. Jones No. 1,	2	.....	500	.....	.....	.....	44	29	.....	25	600	1	1	10	6	5	35	658
New Mine No. 2,	1	.....	100	.....	.....	.....	16	7	.....	15	139	.....	.....	3	2	.....	5	144
Totals,	3	.....	600	.....	.....	.....	60	36	.....	40	739	1	1	13	8	5	35	802
Jefferson Coal Co. Coal Glen No. 1,	2	.....	275	.....	.....	.....	13	.....	11	.....	301	1	1	3	3	1	22	332
Coal Glen No. 2, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Beechtree No. 2,	2	.....	275	.....	.....	.....	13	.....	11	.....	301	1	1	3	3	1	22	332
Totals, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rochester and Pittsburg Coal Hollywood,	1	.....	89	9	74	9	18	8	10	.....	219	1	1	5	10	13	1	265
Irroquois Coal Co. Brook,	1	1	178	.....	.....	.....	3	1	3	4	191	1	.....	4	1	.....	1	206
Lehigh Valley Coal Co. Sugar Camp No. 2,	1	.....	262	.....	.....	.....	14	17	.....	7	301	1	2	2	3	2	13	324
Sugar Camp No. 3,	1	.....	76	.....	.....	.....	3	5	.....	2	87	1	1	2	2	.....	3	95
Sugar Camp No. 13,	1	.....	21	.....	.....	.....	1	.....	.....	2	25	.....	1	.....	.....	.....	1	27
Totals,	3	.....	359	.....	.....	.....	18	22	.....	11	413	1	4	4	5	2	17	446
Cleaveland and Granplan Coal Rayfield No. 2,	1	.....	35	.....	.....	.....	2	.....	3	.....	41	.....	1	.....	.....	.....	1	42
Penn No. 3,	1	.....	44	.....	.....	.....	2	2	3	.....	52	.....	1	.....	.....	.....	1	53
Totals,	2	.....	79	.....	.....	.....	4	2	6	.....	93	.....	2	.....	.....	.....	2	95

TABLE IV.—List of fatal accidents that occurred in and about the mines of the Fourth Bituminous District for the year ending December 31, 1902.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Feb. 1	Paul Turine,	Italian,	Miner,	40	M.	1	4	Mead Run,	Elk,	Was instantly killed in his working place by a fall of slate.
May 19	Gains Fisher,	American,	Driver,	17	S.	...	...	Helvetia,	Clearfield,	Was fatally injured by a mule.
May 24	C. J. Gustafson,	Swede,	Company man,	27	S.	...	...	Knox Run,	Clearfield,	Was instantly killed by a fall of slate.
June 10	Mike Less,	Slavonian,	Miner,	29	S.	...	...	Pleasant Hill,	Clearfield,	Was instantly killed in his working place by a fall of slate.
Aug. 8	Thos. Cauterini,	Italian,	Miner,	35	M.	1	...	Clarion No. 4,	Elk,	Was so seriously injured by fall of slate that he died in six hours after.
Sept. 23	Mike Fender,	Pole,	Miner,	38	M.	1	5	Helvetia,	Clearfield,	Fatally burned by an explosion of fire damp.
Sept. 23	Fergus Bonner,	Irish,	Miner,	36	M.	1	1	Helvetia,	Clearfield,	Fatally burned by an explosion of fire damp.
Oct. 14	William Kanschus, ..	Lithuanian, ..	Miner,	32	S.	...	...	Rochester,	Clearfield,	Were both instantly killed by fall of slate.
Oct. 17	Mike Kersch,	Lithuanian, ..	Miner,	24	S.	...	...	Rochester,	Clearfield,	Was instantly killed by ears.
Nov. 17	John Kaayuk,	Slavonian, ..	Miner,	28	M.	1	...	London,	Jefferson,	Was instantly killed by a blast.
Nov. 28	James McGority, ...	American, ...	Miner,	33	M.	1	3	Snow Shoe No. 5, ..	Centre,	Was instantly killed by a blast.

TABLE V.—List of non-fatal accidents that occurred in and about the mines of the Fourth Bituminous District for the year ending December 31, 1902.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan. 2	John Anderson,	Swede,	Company man,	33	S	DuBois shaft No. 1, ...	Clearfield, ...	Severely injured by fall of top coal.
28	Robert Young,	Scotch,	Miner,	38	M	Anna "S",	Tioga,	Seriously injured by falling from a bucket while riding on aerial wire.
Feb. 4	William Wise,	American,	Miner,	30	S	Snow Shoe No. 3,	Centre,	Collar bone broken by fall of bone coal.
17	John VanOrder,	American,	Miner,	50	M	Antrim No. 3,	Tioga,	Hand cut and body severely bruised by cars outside the mine.
Mar. 19	George Hoffman,	American,	Driver,	32	M	Knox Run,	Clearfield, ...	Foot severely injured by cars.
4	William Lecker, Jr.,	English,	Runner,	15	S	DuBois shaft No. 1, ...	Clearfield, ...	Leg severely injured by fall of coal.
Mar. 21	Philip Zindie,	American,	Miner,	26	M	Snow Shoe No. 4,	Centre,	Leg severely injured by fall of coal.
April 5	Bartolo Blise,	Austrian,	Miner,	22	M	Shawmut No. 5,	Elk,	Severely injured by fall of coal.
13	A. L. Christian,	American,	Mine foreman,	35	M	Helvetia,	Clearfield, ...	Injured by being squeezed between mine cars and pillar.
24	Joseph Nowara,	Pole,	Miner,	27	M	Kettle Creek,	Clinton, ...	Leg fractured by fall of slate.
May 16	Joseph Graham,	American,	Driver,	18	S	Helvetia,	Clearfield, ...	Squeezed between mine car and pillar.
24	Lawrence Holt,	American,	Door boy,	14	S	Knox Run,	Clearfield, ...	Head cut and otherwise injured by fall of slate.
28	Matta Stein,	Finlander,	Miner,	38	M	Kettle Creek,	Clinton, ...	Back broken by fall of slate.
31	George Copps,	Slavonian,	Miner,	63	M	London,	Jefferson, ...	Arm and leg fractured; struck by trip of
June 7	Phelix Iskirwitz,	Pole,	Trip runner, ...	16	S	Williamsport No. 2, ..	Clearfield, ...	Both arms broken by being run over by mine cars.
23	Marty Morris,	Slavonian,	Miner,	37	M	Raybold No. 2,	Clearfield, ...	Leg fractured by fall of coal and slate.
July 2	G. Natora,	Austrian,	Miner,	46	S	DuBois No. 1,	Elk,	Injured by fall of roof slate.
Aug. 2	Jacob Jimbaw,	Austrian,	Miner,	42	M	Bar Run,	Tioga,	Back injured by fall of roof slate.
22	Andrew Voytick,	Pole,	Miner,	20	S	Sugar Camp No. 10, ...	Centre,	Thigh broken by being caught between cars.
Sept. 27	Charles Burkavitch,	Pole,	Miner,	40	M	DuBois shaft No. 1, ...	Clearfield, ...	Arm crushed by being run over by cars.
2	Santo Shala,	Italian,	Miner,	27	S	Hyne No. 21,	Elk,	Seriously burned by powder explosion, while making up cartridge.
5	J. H. King,	American,	Miner,	38	M	DuBois shaft No. 1, ...	Clearfield, ...	Shoulder and collar bone broken by fall of coal.
23	Dennis McGee,	Irish,	Miner,	35	S	Helvetia,	Clearfield, ...	Seriously burned by explosion of fire damp.

23	John McGlynn,	Irish,	Miner,	29	S.	Helvetia,	Clearfield, ...	Severely burned by explosion of gas.
23	John McGlynn,	Irish,	Miner,	27	S.	Helvetia,	Clearfield, ...	Severely burned by explosion of gas.
23	John Chicker,	Pole,	Miner,	26	S.	Helvetia,	Clearfield, ...	Severely burned by explosion of gas.
23	Andrew Bosack,	Pole,	Miner,	22	M.	Helvetia,	Elk,	Slightly burned by explosion of gas.
1	Thomas Lesneskie,	American,	Door boy,	14	S.	Byrne No. 21,	Elk,	Leg fractured by fall of slate.
8	George Chuhnan,	Italian,	Miner,	23	M.	Clarion No. 27,	Clearfield, ...	Seriously injured by fall of slate.
4	George C. Harvey,	English,	Cager,	19	S.	DuBois shaft No. 1, ...	Clearfield, ...	Scalp injured by being struck by piece of coal falling down shaft.
13	Bud King,	American,	Cager,	16	S.	DuBois shaft No. 1, ...	Clearfield, ...	Hand crushed by being struck by coal falling down shaft.
5	Joseph Ambrosia,	Italian,	Driver,	22	M.	Cardiff No. 41,	Elk,	Leg fractured; caught between cars.
8	William Marshall, Jr.,	American,	Miner,	22	S.	Dagus No. 1,	Elk,	Leg fractured by fall of slate.
15	Charles Cusner,	American,	Miner,	28	M.	Dagus No. 1,	Elk,	Seriously injured by fall of roof slate.
15	Toney Muscatell,	Italian,	Miner,	25	M.	Shawmut No. 6,	Elk,	Back and arm broken by fall of roof slate.
19	Sauto Serafine,	Italian,	Miner,	28	S.	Shawmut No. 5,	Elk,	Leg fractured; caught between mining machine and pillar.
26	Joseph Supenus,	Pole,	Miner,	18	S.	DuBois shaft No. 1, ...	Clearfield, ...	Leg severely injured by mine cars in the mine.
30	Jerry Sullivan,	Irish,	Miner,	54	S.	DuBois shaft No. 1, ...	Clearfield, ...	Severely injured by blast fired in the coal.

Oct.

Dec.



Fifth Bituminous District

FAYETTE COUNTY

Uniontown, Pa., March, 1903.

Hon. Jas. W. Latta, Secretary of Internal Affairs, Harrisburg, Pa.

Sir: In compliance with act of Assembly relating to Bituminous mines, approved May 15, 1893, I have the pleasure of herewith submitting my annual report of the Fifth District for the year ending December 31, 1902.

The report contains the usual statistics.

The total production of coal as shown by Table 2 was 9,548,896 tons, an increase of 2,344,873 tons over the preceding year.

The average number of days worked was 265.71.

The number of persons employed was 12,794, an increase of 1,792 over year 1901. The increase of persons employed was largely due to new construction work and improvements made in and about the operations, along with the greater production.

The number of fatal accidents was 34, 7 less than the previous year. The non-fatal ones numbered 68, 20 more than last year.

The number of wives made widows was 13, and the number of children orphaned, 33.

The reduction in number of fatal accidents is gratifying, considering the increased production.

With but few exceptions, the ventilation was good; the average number of cubic feet of air per minute circulating for each employe was taken at the various air splits.

It has been necessary to prosecute some laborers who violated the law. In some cases they opened their safety lamps, while in others they carried matches, pipes and tobacco into the mine.

The report shows 73 mines in the district. I have been relieved of thirteen of them by the appointment of additional inspectors, but there are now in course of preparation in this district 15 new mines.

The names of successful candidates for mine foreman are shown in report.

In all cases where it has been necessary to call the attention of operators to defects, they have been most courteous, and at all times willing to co-operate and make such changes and improvements as I have suggested.

Yours truly,

I. G. ROBY,
Inspector.

Summary of Statistics for 1902.

Number of mines in district,	73
Number of mines in operation during 1902,	68
Number of tons of coal produced,	9,548,896
Number of tons shipped to market,	2,833,450
Number of tons sold at mines to local trade,	74,279
Number of tons consumed at mines in generating steam and heat,	211,172
Number of coke ovens in the district,	10,009
Number of coke ovens in operation during 1902,	9,927
Number of tons of coke produced,	4,255,453
Number of tons of coal used in manufacture of coke,...	6,430,065
Number of tons produced by pick mining,	7,910,901
Number of tons produced by compressed air machines,.	240,944
Number of tons produced by electrical machines,.....	1,397,051
Number of persons employed inside the mines,	8,082
Number of persons employed outside, including coke workers,	4,712
Number of persons employed at manufacture of coke,..	3,084
Number of fatal accidents inside the mines,	33
Number of tons produced for each fatal accident inside,	280,850
Number of persons employed per fatal accident inside,.	245
Number of fatal accidents outside,	1
Number of persons employed per fatal accident outside,	4,712
Number of wives made widows by fatal accidents,.....	13
Number of children orphaned by fatal accidents,	33
Number of non-fatal accidents inside of mines,	66
Number of persons employed per non-fatal accident inside,	119
Number of non-fatal accidents outside,	2
Number of persons employed per non-fatal accident out- side,	2,356
Number of electric motors used inside,	7
Number of fans used for ventilation,	49
Number of furnaces used for ventilation,	13
Number of gaseous mines in operation during 1902,....	34

Number of non-gaseous mines in operation during 1902,	39
Number of new mines opened in 1902,	6
Number of old mines abandoned during 1902,	1

A. Production of Coal During the Year 1902.

Names of Companies.	Tons.
H. C. Frick Coke Co.,	2,038,955
South West Connellsville Coke Co.,	1,016,628
American Coke Co.,	629,747
Continental Coke Co.,	662,376
Monongahela River Consolidated Coal and Coke Co.,...	1,616,532
Pittsburg Coal Co.,	224,065
Oliver and Snider Steel Co.,	621,979
W. J. Rainey,	583,400
Bessemer Coke Co.,	264,115
A. L. Keister & Co.,	179,470
Peoples' Coal Co.,	412,603
Atlas Coke Co.,	179,554
Stewart Iron Co., Limited,	105,670
Fayette Coke Co.,	103,161
Riverview Coal and Coke Co.,	155,680
Joseph Wharton,	65,914
Colonial Coke Co.,	62,000
E. A. Humphries & Co.,	45,000
Lake Erie Gas Coal and Coke Co.,	83,013
Hero Coal and Coke Co.,	64,000
Puritan Coal and Coke Co.,	68,779
Isaac Taylor & Co.,	75,058
Bute Run Coal and Coke Co.,	2,475
Percy Mining Company,	31,705
Cheat Haven Coal Co.,	52,000
Eleanor Coal and Coke Co.,	15,133
H. S. Sackett & Co.,	25,500
Sharon Coke Co.,	29,929
Penn Coke Co.,	49,300
Uniontown Coke Co.,	23,050
Leckrone Coke Co.,	2,400
Jno. Snider & Co.,	9,672
Connellsville Coke Co.,	49,183
Labell Iron Works,	850
Total,	9,548,896

B. Showing the number of fatal and non-fatal accidents inside and outside the mines; number of tons of coal produced per fatal and non-fatal accident inside the mines; number of persons employed inside and outside; and the number employed inside and outside for every fatal and non-fatal accident for each company during 1902.

Names of Companies.	Number of lives lost inside.	Number of lives lost outside.	Total number of lives lost.	Number severely injured inside.	Number severely injured outside.	Total number severely injured.	Tons of coal produced per each life lost inside.	Tons of coal produced per serious injury inside.	Number employees inside of mines.	Number employees outside of mines.	Total number employed.	Number of employees inside for each life lost.	Number of employees inside for each severe injury.	Number of employees outside for each life lost.	Number of employees outside for each severe injury.
H. C. Fitch Coke Co.,	11	3	14	7	7	14	185,359.54	291,279.23	1,511	1,144	2,655	137.26	215.85	1,144	1,144
Continental Coke Co.,	3	...	3	1	1	2	220,732	662,376.62	560	334	894	186.66	569.34	234	334
South West Connellsville Coke Co.,	...	...	...	...	...	...	1,016,628	92,420.72	914	599	1,513	914	186.66	599	599
American Coke Co.,	...	...	...	...	...	...	125,940.4	89,963.85	911	396	1,307	182.20	130.14	396	396
Oliver & Snider Steel Co.,	1	...	1	1	1	2	621,979	621,979	468	302	768	466	466	302	302
M. R. C. C. and Coke Co.,	...	...	...	...	...	...	898,266	135,130.17	1,220	131	1,351	610	101.7	131	131
Pittsburg Coal Co.,	...	...	...	...	...	...	74,688.33	37,344.66	231	49	280	77	38.5	49	49
W. J. Ramsey,	4	...	4	4	4	8	145,830	135,870	368	409	867	92	92	409	409
Assessor Coke & Co.,	...	...	...	...	...	...	264,115	192,657.5	223	303	526	223	111.5	303	303
Proctor Coal Co.,	...	...	...	...	...	...	179,470	179,470	176	103	279	176	176	103	103
Proctor Coal Co.,	3	1	4	3	1	4	137,534.33	137,534.33	350	25	375	116.66	116.66	25	25
Atlas Coke Co.,	...	...	...	...	...	...	179,354	179,354	116	97	213	115	115	97	97
Stewart Iron Co., Ltd.,	...	...	...	...	...	...	103,181	56,970.5	75	86	161	86	86	86	86
Payette Coal Co.,	...	...	...	...	...	...	103,181	56,970.5	75	86	161	86	86	86	86
Riverview Coal and Coke Co.,	...	...	...	...	...	...	155,680	77,840	105	122	227	105	105	122	122
Joseph Wharton,	...	...	...	...	...	...	65,914	65,914	48	31	79	48	48	31	31
Colonial Coal Co.,	...	...	...	...	...	...	82,000	62,000	53	47	100	53	53	47	47
E. A. Humphries & Co.,	...	...	...	...	...	...	45,000	45,000	34	74	108	34	34	74	74
Lake Erie Gas Coal and Coke Co.,	...	...	...	...	...	...	83,013	20,753.25	104	12	116	104	26	12	12
Beno Coal and Coke Co.,	...	...	...	...	...	...	64,000	64,000	53	18	71	53	53	18	18
Puritan Coke Co.,	...	...	...	...	...	...	68,779	34,389.5	35	21	56	35	35	21	21
Isaac Taylor & Co.,	1	1	2	2	2	4	75,658	75,658	52	27	79	52	52	27	27
Little Run Coal and Coke Co.,	...	...	...	...	...	...	2,475	2,475	15	11	26	15	15	11	11
Frederick Mining Co.,	...	...	...	...	...	...	31,705	31,705	28	27	55	28	28	27	27
Chad Hill Coal and Coke Co.,	...	...	...	...	...	...	52,000	52,000	65	10	75	65	65	10	10
Eleanor Coal and Coke Co.,	...	...	...	...	...	...	15,133	15,133	16	15	31	16	16	15	15
H. S. Sackett & Co.,	...	...	...	...	...	...	25,500	25,500	28	17	45	28	28	17	17
Sharon Coke Co.,	...	...	...	...	...	...	25,929	25,929	83	19	102	83	83	19	19

C. Classification of Fatal Accidents for the Year 1902.

	Inside of Mines.										Outside of Mines.							Grand total.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
	By Falls of			By mine cars.	By explosion of gas.	Smothered by gas.	Powder and dynamite.	By blasts, etc.	By Falling into			Crushed at batteries.	By mules.	Suffocated by coal, etc.	Miscellaneous causes.	Total inside.	By cars.		By machinery.	By suffocation.	By boiler explosions.	Miscellaneous causes.	Total outside.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
	Coal.	Shale.	Roof.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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G. Nationality of Employees Killed or Fatally Injured Inside and Outside the Mines During 1902.

	Americans.	English.	Poles.	Hungarians.	Slavs.	Austrians.	Swedes.	Total.
January,	12				1	2		5
February,	1		1					2
March,					1	1		2
April,				2	1	1		4
May,					1			1
June,					1		1	2
July,	2	1						3
August,						1		1
September,					3			3
October,					1			1
November,	3			1	1			5
December,					3			3
Totals,	8	1	1	3	15	5	1	34

H. Nationality of Employees Severely Injured Inside and Outside the Mines During 1902.

	Americans.	English.	Welsh.	Irish.	Polish.	Hungarians.	Italians.	Slavs.	Lithuanians.	Austrians.	Bohemians.	Finn.	Total.
January,				1				1					2
February,			1					1		1			3
March,	3				2			1		1			7
April,	1												1
May,	3			1			1	2			1		7
June,	3	1			1			1					6
July,	3							1		1			5
August,	1		2			1		3		2			9
September,						1		1					2
October,				1	1			2					4
November,	1	1				1			1				4
December,	3					1		1					6
Totals,	17	2	3	2	4	4	3	17	1	4	1	2	48

I. Giving names of operators and mines, kind of openings, type and size of fans; size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each employee per minute in Fifth Bituminous District for the year 1902.

Names of Operators and Mines.	Wind of opening.	Gaseous or non-gaseous.	Method of ventilation.	Diameter and width of fan in feet.	Water gauge developed—inches.	Name of fan.	Power used.	Area of furnace bars in square feet.	Number of air splits of air currents.	Number of cubic feet of air per minute entering the mine at inlet.	Total quantity of air per minute circulating in all the splits in cubic feet.	Number of cubic feet per minute passing out at outlet.	Number of persons employed inside.	Average number of cubic feet per minute provided for each person.	
H. C. Fryck Coke Co.															
Lockington No. 2.	Shaft.	Gaseous.	Fan.	10 x 20	1.7	Capell.	Steam.	.....	.....	200,500	249,500	214,000	287	730
Youngstown No. 1.	Slope.	Gaseous.	Fan.	6 1/2 x 20	1.75	Gubal.	Steam.	.....	.....	120,000	126,000	126,000	130	754
Lemont No. 1.	Slope.	Gaseous.	Fan.	10 x 12	1.8	Capell.	Steam.	.....	.....	160,000	168,200	158,200	126	1,227
Lemont No. 2.	Slope.	Gaseous.	Fan.	6 1/2 x 20	1.8	Gubal.	Steam.	.....	.....	116,000	116,000	122,500	130	611
Lemont No. 3.	Slope.	Non-gas.	Fan.	8 x 16	1.25	Capell.	Steam.	.....	.....	40,000	32,400	62,400	.....	.....
Leith.	Shaft.	Gaseous.	Fan.	8 x 16	1.25	Capell.	Steam.	.....	.....	162,000	148,000	172,000	181	817
Redstone No. 1.	Slope.	Gaseous.	Fan.	6 x 20	1.7	Gubal.	Steam.	.....	.....	81,800	76,000	76,000	193	717
Redstone No. 2.	Slope.	Gaseous.	Fan.	4 1/2 x 16	1.5	Brazil.	Steam.	.....	.....	92,400	74,600	97,500	138	540
Oilphant.	Slope.	Gaseous.	Fan.	4 x 12	1.7	Brazil.	Steam.	.....	.....	27,850	27,850	28,000	76	356
Wylam.	Slope.	Gaseous.	Fan.	4 x 12	1.7	Brazil.	Steam.	.....	.....	88,200	66,400	98,000	180	368
Kyle.	Slope & drift.	Non-gas.	Fan.	4 x 12	1.3	Brazil.	Steam.	.....	.....	.....	.....	.....	.....	.....
Southwest Connellsville Coke Co.															
Lockington No. 1.	Drift.	Non-gas.	Fan.	7 x 12 1/2	4	Capell.	Steam.	.....	.....	156,700	156,700	225,000	288	800
Lockington No. 2.	Drift.	Non-gas.	Fan.	7 x 12 1/2	5	Capell.	Electricity	.....	.....	173,000	173,000	173,000	.....	.....
Lockington No. 3.	Drift & slope.	Gaseous.	Fan.	7 x 12 1/2	5	Capell.	Steam.	.....	.....	210,000	206,800	257,000	341	858
Buffington.	Shaft.	Gaseous.	Fan.	10 x 14	1.1	Capell.	Steam.	.....	.....	212,000	212,000	237,000	355	550
Connellsville Coke Co.															
Continental No. 1.	Shaft.	Gaseous.	Fan.	8 x 16	5	Capell.	Steam.	.....	.....	140,000	130,400	134,200	211	618
Continental No. 2.	Shaft.	Gaseous.	Fan.	8 x 16	7	Capell.	Steam.	.....	.....	97,500	97,500	110,800	172	567
Continental No. 3.	Slope.	Non-gas.	Fan.	4 x 16	3	Brazil.	Steam.	.....	.....	96,000	82,400	81,450	177	607
Continental No. 4.	Drift.	Non-gas.	Fan.	3 1/2 x 14	2	Brazil.	Steam.	.....	.....	28,000	25,000	31,600	.....	.....
American Coke Co.															
Lambert.	Shaft.	Gaseous.	Fan.	25 x 8	1.3	Gubal.	Steam.	.....	.....	151,400	151,200	151,200	415	364

TABLE I—Continued.

Names of operators and mines.	Kind of opening.	Gaseous or non-gaseous.	Method of ventilation.	Diameter and width of fan in feet.	Water gauge developed in inches.	Name of fan.	Power used.	Area of furnace bars in square feet.	Number of air splits of air currents.	Number of cubic feet of air per minute entering the mine at inlet.	Total quantity of air per minute circulating in all the splits in cubic feet.	Number of cubic feet per minute passing out at out- let.	Number of persons employed inside.	Average number of cubic feet per minute provided for each person.
Portland Coke Co. Coke Co. Coke Co.	Shaft. Shaft. Shaft.	Gaseous. Gaseous. Gaseous.	Fan. Fan. Fan.	20 x 8 13 x 5 13 x 5	1.4 .8 .7	Gulbal. Capell. Capell.	Steam. Steam. Steam.	..... ..... .....	1 1 1	108,000 146,400 105,000	108,000 123,400 171,400	172,400 171,400 96,000	194 302 620	866
Oliver & Under Steel Co. Coke Co. Coke Co.	Shaft. Shaft. Shaft.	Gaseous. Gaseous. Gaseous.	Fan. Fan. Fan.	20 x 7½..........	.6	Gulbal.	Steam. ..... .....	..... ..... .....	4 4 4	109,600 116,900	87,400 93,200	172,000 169,400	219 247 380	400
Bessemer Coke Co. Gulfin No. 1. Gulfin No. 2. Gulfin No. 3.	Drift. Drift. Drift.	Non-gas. Non-gas. Non-gas.	Furnace. Furnace. Natural.	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	150 175	2 1 1	48,000 18,700 15,200	45,700 18,700 15,200	64,200 22,000 16,800	223	358
W. J. Roney. Roxas No. 1. Roxas No. 2. Mt. Babbalaw.	Slope. Drift. Slope.	Non-gas. Non-gas. Gaseous.	Fan. Furnace. Fan.	16 x 8 20 x 6.....	.7	Capell. Gulbal.	Steam. Steam.	..... ..... .....	2 2 3	83,200 21,000 58,600	69,000 21,000 61,200	76,000 26,000 67,200	101 116 151	598 187 405
A. L. Webster & Co. Lincoln. Stewart Iron Co., Ltd. Stewart.	Slope. Slope. Slope.	Gaseous. Gaseous. Gaseous.	Fan. Fan. Fan.	20 x 7½ 20 x 8.....	.5	Gulbal. Gulbal. Gulbal.	Steam. Steam. Steam.	..... ..... .....	4 2 2	80,000 68,000 68,000	71,320 68,000 68,000	91,600 72,000 72,000	176 89 764	422
Fayette Coke Co. Shamrock. M. R. C. & Coke Co. Washington. Little Alps. Alcoa. Shaw Hill.	Slope. Drift. Drift. Drift. Drift. Drift.	Non-gas. Gaseous. Non-gas. Gaseous. Non-gas. Non-gas.	Fan. Fan. Fan. Fan. Fan. Fan.	9 x 7½ 16 x 6 25 x 9 20 x 7..........	.4	Capell. Pollock. Pollock. Pollock. Pollock. Pollock.	Steam. Steam. Steam. Steam. Steam. Steam.	..... ..... ..... ..... ..... .....	1 2 2 2 2 2	41,500 31,600 29,700 78,600 20,700 20,400	31,500 33,800 29,700 84,320 20,700 20,400	55,000 37,800 29,400 84,000 20,400 20,400	75 136 37 221 149 149	429 248 506 291 527 527

[illegible]

Ventilated by fan at No. 1

Ventilated by Washington

Slope workings.

TABLE 1--Continued.

Names of operators and mines.	Kind of opening.	Class of ventilation.	Method of ventilation.	Diameter and width of fan in feet.	Water power developed in the fan.	Name of fan.	Type used.	Area of flange bars in square feet.	Number of air splits of air currents.	Number of cubic feet of air per minute entering the mine at intake.	Total quantity of air per minute circulating in all the splits in entire foot- candle.	Number of cubic feet cap- tured passing out at out- let.	Number of persons employed.	Average number of cubic feet per minute provided for each person.
Percy Mining Co.	Shaft.....	Non-gas.	Fan.....	12 x 4	2	Guibal.....	Steam.....	.....	1	40,000	40,000	44,800	28	1,439
Lake Erie Gas Coal and Pike Co.	Shaft & slope.....	Gas vs.	Fan.....	20 x 7	3	Guibal.....	Steam.....	.....	3	139,400	102,600	121,800	104	985
Pecoles' Coal Co.	Drift.....	Gas vs.	Fan.....	20 x 7	4	R. Robinson.....	Steam.....	.....	3	88,600	82,400	91,600	350	235
Cheat Haven Coal Co.	Drift.....	Non-gas.	Furnace.....	.....	.....	.....	.....	96	2	21,600	15,340	18,610	65	226
Eagle.....	Drift.....	Non-gas.	Furnace.....	.....	.....	.....	.....	80	1	15,400	15,400	16,200	16	932
Eleanor Coal Co.	Drift.....	Non-gas.	Furnace.....	.....	.....	.....	.....	40	1	11,880	10,800	14,640	28	386
Sackett Coal and Coke Co. Sackett.	Drift.....	Non-gas.	Furnace.....	.....	.....	.....	.....	24	1	5,200	5,200	6,150	11	473
Lakewood Coal Co. Amanda.	Drift.....	Non-gas.	Furnace.....	.....	.....	.....	.....	.....	1	4,600	2,880	4,860	8	369
John Suther & Co. Suther.	Drift.....	Non-gas.	Natural.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lodell Iron Works Lodell.	Drift.....	Non-gas.	Natural.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

New opening.

J. Names of mines using coal cutting machines, names of machines, power used, geological and local names of seams, thickest and thinnest seams where machines are used, and the approximate number of tons produced by machines during 1902.

Names of Mines.	Kind of opening.	Gaseous or non-gaseous.	Name and Number of Machines in Use.					Total machines used.	Power used by machines.	Geological and local name of seam.	Average thickness in inches.		Height of seam in inches.		Approximate number of tons produced by machines.
			Ingersoll.	Sullivan.	Harrison.	Jeffrey.	Morgan-Clardner.				Thickest.	Thinnest.			
Lockport No. 1.	Drift.	Non-gas.						5	Electricity.	Pittsburg.	91	102	79	54,655	
Lockport No. 2.	Drift.	Non-gas.						4	Electricity.	Pittsburg.	91	102	79	52,824	
Lockport No. 3.	Drift.	Non-gas.					1	1	Electricity.	Pittsburg.	98	108	88	52,824	
Lockport No. 4.	Drift.	Non-gas.						4	Electricity.	Pittsburg.	92	108	84	6,128	
Lockport No. 5.	Drift.	Non-gas.						6	Electricity.	Pittsburg.	96	108	84	166,228	
Lockport No. 6.	Drift.	Non-gas.						6	Electricity.	Pittsburg.	93	96	90	2,800	
Lockport No. 7.	Drift.	Non-gas.						6	Electricity.	Pittsburg.	81	84	84	8,000	
Lockport No. 8.	Drift.	Non-gas.						6	Electricity.	Pittsburg.	108	120	84	15,000	
Lockport No. 9.	Drift.	Non-gas.						6	Electricity.	Pittsburg.	96	96	96	31,862	
Lockport No. 10.	Drift.	Non-gas.						6	Electricity.	Pittsburg.	108	114	102	17,368	
Lockport No. 11.	Drift.	Non-gas.						6	Electricity.	Pittsburg.	96	98	88	24,884	
Lockport No. 12.	Drift.	Non-gas.						6	Electricity.	Pittsburg.	96	98	94	29,988	
Lockport No. 13.	Drift.	Non-gas.						6	Electricity.	Pittsburg.	90	92	88	165,654	
Lockport No. 14.	Drift.	Non-gas.						6	Electricity.	Pittsburg.	90	92	70	113,892	
Lockport No. 15.	Drift.	Non-gas.						6	Electricity.	Pittsburg.	90	89	84	299,152	
Totals.			15	2	1	1	1	5							1,208,125

FATAL AND NON-FATAL ACCIDENTS.

Accidents to Drivers, Runners and Others, by Mine Cars.

The number of accidents resulting from this cause was 37 in all, 14 of which caused death. The remaining 23 were injured. Eight of those killed were employed as drivers and 6 were miners and company men. Of the 23 injured 13 were drivers and 10 men employed in various ways in the mines. Some were killed while riding on trips; others were crushed against ribs or under cars on slopes, while some slipped and fell in front of moving cars. To prevent this class of accidents, it is clear that experienced men should be employed; also strict rules prohibiting workmen from traveling on slopes, roads or haulage ways should be enforced, when their work does not require them to do so. Wider haulage roads are also recommended.

Accidents Due to Falls of Roof and Slate.

There were 16 fatal and 31 non-fatal accidents due to falls of roof coal and slate, making a total of 47. In other words 47 per cent. of the fatal and 47.2 per cent. of non-fatal accidents were due to this cause. By a careful investigation of the fatal accidents the evidence was such as to warrant an opinion that 8 or 50 per cent. might have been averted by using judgment. The remaining 8 were of such a nature that even experienced men might have failed to observe the dangers and they should be classed as unavoidable accidents. We must note then that 50 per cent. of the fatalities were not due so much to the unfortunate victims not understanding the dangers, as the total indifference shown by them regarding their own safety, they preferring to take chances instead of carefully protecting themselves and keeping on the side of safety. The enforcement of strict rules on the part of the management, requiring a more systematic use of timber, regardless of cost, will, in my judgment, result in the saving of many lives.

Accidents from Miscellaneous Causes.

Five persons were seriously burned at the Bullington mine, South West Connellsville Coke Company, December 24, in number 7 room off number 2 flat north about 8.30 A. M. An investigation of this accident disclosed the fact that two holes had been drilled in the face of this room; two sticks of dynamite placed in one and five in the other and made ready for firing; on the arrival of the shot-firer both holes were connected with the battery. One failed to explode. A few moments afterwards the wires were again adjusted and the

other hole discharged. This had given time for the gases from the first blast to come into the face of the room. When the second shot was exploded the stemming and the five sticks of dynamite were blown out. The energy spent in raising the heat to such a high temperature possibly breaking up the chemical union of the carbonic acid, and transformed it into an explosive mixture, along with some particles of coal dust which intensified and augmented the force of the explosion to such a degree as to blow down part of a stopping made of boards 250 feet distant from shot, and to blow into the adjoining room the five persons who were sitting in a cut-through, 23 feet from the face of the room.

Another blown out shot occurred in Donald No. 1, Riverview Coal and Coke Company, in which one miner was severely burned. The concussion from the blown out shot ignited the coal dust, causing a local explosion.

By a premature blast another miner was severely burned in the Sumner mine, Lake Erie Gas Coal Coke Company. He had an open light on his cap, contrary to instructions of the mine foreman, and a spark fell from the lamp, igniting the powder of a cartridge he was preparing.

Accidents from Miscellaneous Causes.

One by falling down a shaft. Another in tearing the belt of an elevator engine was caught, and in an effort to free himself was thrown or slipped into a fly wheel running 120 revolutions per minute. Two others fell in front of moving cars on the tippie outside. Still others were caught by mining machines, etc., etc.

Such accidents as enumerated above can only be averted by the employment of more practical men, together with the enforcement of a more rigid and exacting discipline on the part of the management, and good judgment on the part of the employe himself.

Fire-damp Explosions.

An explosion of fire-damp occurred in the Grindstone mine, Pittsburgh Coal Company, June 3, 1902, about 8.30 A. M., in No. 1 butt, No. 2 face, entry south. James Eaton, mine foreman, was fatally, and John Robinson, boss roadman, seriously burned. Eaton died at the Cottage Hospital at 7 P. M. the same day. On my arrival at the mine I immediately examined the mine record book. April 26 was the last record or entry of gas shown, until the morning the explosion occurred. This entry showed gas in No. 2 butt or parallel to the entry where the explosion occurred. On the morning of the explosion the fire boss reported gas in this heading, tailing back 74

feet from the face, and he notified the miners not to enter the entry. He also claimed that he made a verbal report to the mine foreman. In addition he placed a danger board about 200 feet below where gas indicated on the safety lamp. On the day previous three inexperienced men had been employed who on the fatal morning, entered the mine in company with the mine foreman for the first time with a view of commencing work. They proceeded to this part of the mine and were near when the explosion occurred. They were either blown or fell down and escaped with very slight injuries. This appears to have been a very peculiar coincidence, as the mine foreman was fatally and boss roadman so severely burned that several weeks elapsed before it could be determined whether he would survive or not. The mine foreman carried a safety lamp in his hand and an open light on his cap, and carelessly passed the danger board, igniting the gas with open light. On December 3, 1901, three engineers lost their lives in this mine through the careless use of open lights.

Mine Improvements.

Brier Hill Coke Company is a subsidiary company of the Brier Hill Iron and Steel Company, of Youngstown, Ohio. The property is located in the new Klondyke field, and will be connected with the P. R. R. L. and E. by a branch leading from Brownsville, Pa. The shaft will be approximately 500 feet. The construction work will in general resemble that of the most modern in the lower Connellsville basin. The field contains about 1,100 acres. Ovens will be built as the mine is developed.

Orient Coal and Coke Company is a new development on Dunlaps Creek one half mile west of New Salem, embracing 1,150 acres of coal. One hundred ovens will be erected at once, and as the plant develops, will be increased to 500. Two shafts each 12 feet 2 inches by 26 feet and 540 feet deep, will reach the coal. A steel tippie and bins will make this a complete plant.

LaBelle Iron Works is a new operation on the Monongahela river. Two hundred coke ovens will be erected. It is a drift mine and will be equipped with improved machinery. Will ship over the P. L. and E. extension.

Connellsville Central Coke Company.—Three hundred and fifty ovens will be built as rapidly as development work in the mine will allow. A spur of the Coal Lick Run branch, connecting at New Salem, will furnish railroad facilities.

Rich Hill Coal Company is a new operation in the southern part of Fayette county. Fifty ovens are now under construction; another 100 will be added as the mine is developed. Product will be shipped over the B. and O. R. R.

Masontown Coal and Coke Company.—Development work has begun at this mine which will be a slope. The work will be modern and up-to-date in every particular. One hundred and fifty ovens will be built.

Leonard and McHugh.—This is a small operation in the Sewickley seam. Thirty ovens will be built.

Bessemer Coke Company.—Developing a new operation on Jacobs Creek, in the lower Connellsville basin. Two hundred ovens will be erected as the mine is developed. The work is being vigorously prosecuted.

Oliver and Snider Steel Company is sinking two shafts one and one-fourth miles from Oliver No. 1. A 20-foot Capell fan will be installed at the new operation, with a view of ventilating Nos. 1 and 3, as soon as connections can be made. They are working three shifts from No. 1 every 24 hours and expect to prosecute the work as vigorously from No. 3 when coal is struck. When this work is completed No. 2 will be separated from No. 1 by permanent stoppings, and be ventilated with the fan that is now in operation. The contract for the new fan calls for 400,000 cubic feet with a two-inch water gauge. Three hundred ovens of the Bee-hive type, 13 feet in diameter, which is above the average, will be erected at the new plant.

Geneva Coke Company is in the southern part of Fayette; 50 ovens will be erected at this plant.

Whyles Bros.—This is a new operation in the southern part of the field on the B. & O. R. R. Fifty ovens will be erected.

Sackett Coal and Coal Company will develop a new plant with 100 ovens on the B. & O. R. R. This is also in the southern part of Fayette county.

The H. C. Frick Coke Company has now under construction a 150 oven plant in the southern part of Fayette county on the line of B. & O. R. R., between Smithfield and Leckrone.

Jacobs Creek Coal Company will develop a coal operation on the Monongahela river below New Geneva.

Hustead & Co. are opening the Sewickley coal for shipment on M. & N. S. R. R.

Wheeling Iron and Steel Company will begin operation soon on a new plant near Gates.

Condition of Mines.

H. C. Frick Coke Company.—The mines under this company, 23 in number, as a whole are in a healthful and very satisfactory condition. The improvements talked of at Kyle and Redstone have not yet materialized, although I am reliably informed that Redstone

mines will be improved during the year and will rank among the best in the district. The mines under this company in the new Klondyke field have developed very rapidly, and I have found them to be up to the standard that perhaps is unexcelled.

Monongahela River Consolidated Coal and Coke Company.—The general conditions of the mines, 11 in number, belonging to this company will compare favorably with their conditions a year ago. The ventilation in some of these mines is not good, and I have had occasion to complain. I have found the drainage and other conditions very satisfactory with but two exceptions. The drainage in these two mines has occasioned considerable complaint.

W. J. Rainey.—The conditions of these mines are similar to those of a year ago. Revere No. 1 and Mt. Braddock on all my visits have been in a healthful condition, while the Drift or Revere No. 2 is not so well ventilated. However, there will soon be a connection made between Nos 1 and 2 Revere, when the ventilation in No. 2 mine will be much improved.

Pittsburg Coal Company.—The mines under this company, four in number, have been in good condition on each of my inspections.

Oliver and Snider Steel Company—Oliver No. 1 and 2.—These mines are very carefully looked after, and while known as very gaseous mines, every effort has been made on the part of the management to meet conditions that are likely to occur. The intention of this company is to put down another drill hole to relieve the gas laden gobs. A new haulage engine has been installed in No. 2 mine.

Bessemer Coke Company—Griffin No. 1.—The condition of this mine has been healthful and drainage good at each visit. Griffin No. 2 is a small drift mine with but light covering, which enables them to drop the surface and make an opening any place desired. Griffin No. 3 is a new slope opening with a fine body of coal to develop. Preparations are being made to instal a new fan at Nos. 1 and 3. One of Guibal type will be erected at No. 3, while the Robinson fan will displace the two furnaces at No. 1.

Atlas Coke Company.—Crossland and Lafayette mines are operated by this company and are very carefully looked after.

Riverview Coal and Coke Company.—Donald Nos. 1 and 2 are ventilated by furnace, and on each visit I have found them up to requirements. A Guibal fan 20 feet in diameter will be installed to ventilate both mines, which will be connected by headings.

A. L. Keister & Co—Lincoln Mine.—On each visit to this mine I have found it in a satisfactory condition. During the year this mine was changed from an open to a closed light mine.

Stewart Iron Company.—This mine is fully up to the requirements in every particular.

Summer.—The drainage and general condition was satisfactory on each visit. During the year the slope that connects the shaft has been equipped with an endless rope haulage and a Phillips dump. Coal is now being shipped from the new opening.

Colonial.—This mine was fully up to the requirements on each visit.

Hero.—The drainage and general condition of this mine were very satisfactory on each visit. Ventilation fair.

Florence.—This is a small drift mine with very light coverings, the openings are numerous and the drainage and general conditions are good.

Chester.—This mine is very carefully looked after, and on each visit I found it in a satisfactory condition.

Mt. Hope is a drift mine with three main openings, one of which developed some gas during the year, and has since been worked with safety lamps. The place where gas was given off was not more than 300 feet from outcrop.

Percy.—During the year this mine suffered a squeeze, which caused the loss of considerable coal.

Smithfield is a small mine with very light covering, cropping on all sides, with a number of openings. It is ventilated by natural means. On each visit found it in satisfactory condition.

Penn Nos. 1 and 2 are owned by Penn Coke Company. No. 2 is a new mine and I have not yet visited it. No. 1 was not well ventilated on last visit.

Sackett.—The condition of this mine is satisfactory.

Connellsville No. 1.—The ventilation and drainage in this mine are good, with the exception of some advance places, in which the air is sluggish.

Eleanor.—Is a small drift opening. The condition was satisfactory at last visit.

Eagle.—The sanitary condition of this mine during the year was satisfactory.

Anniemyra is a drift opening on the Coal Lick Run branch of the P. R. R. The main heading had been driven from the surface about 80 feet when visited.

Bourne.—This mine is very carefully looked after and fully up to the requirements.

Parshall Nos. 1 and 2.—No. 2 is a slope opening and will develop a fine body of coal. This mine will be equipped with modern improvements. One hundred ovens are now in course of construction. The condition at No. 1 was fair at last inspection.

Shamrock.—Has been equipped with a new Capell fan. Fifty additional ovens have been built, and some important changes made in the mine. The condition was satisfactory at last visit.

Snider.—The condition of this mine was fair at each visit.

Ronco is rapidly being developed into a large mine. Its capacity is to be 1,600 tons daily, which will be sufficient to operate the 226 by-product coke ovens now in course of construction at Sharon. These ovens are 43 feet in length, 10 feet longer than the average by-product ovens. Some very bad roof has been encountered in some parts of the mine, which retards the development. The buildings around the shaft are of brick; tenement houses are of the best type. There has also been installed a 16-foot Robinson fan.

TABLE I—Showing names of operators, railroads, etc., and location of collieries in the Fifth Bituminous District for the year 1902.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
H. C. Frick Coke Co.						
Leisenring No. 1,	Fayette.	O. W. Kennedy.	Scottdale.	Chas. J. Warnick.	West Leisenring.	P. V. & C.
Lemont No. 1,	Fayette.	O. W. Kennedy.	Scottdale.	P. C. Glenn.	Lemont Furnace.	P. R. R.
Lemont No. 2,	Fayette.	O. W. Kennedy.	Scottdale.	C. M. Shank.	Lemont Furnace.	P. R. R.
Lemont No. 3,	Fayette.	O. W. Kennedy.	Scottdale.	C. M. Shank.	Lemont Furnace.	P. R. R.
Leith,	Fayette.	O. W. Kennedy.	Scottdale.	Harry Whyte.	Uniontown.	P. R. R.
Redstone No. 1,	Fayette.	O. W. Kennedy.	Scottdale.	J. M. Simpson.	Brownfield.	P. R. R.
Redstone No. 2,	Fayette.	O. W. Kennedy.	Scottdale.	J. M. Simpson.	Brownfield.	P. R. R.
Olipphant,	Fayette.	O. W. Kennedy.	Scottdale.	John T. Hoover.	Olipphant Furnace.	P. R. R.
Whyann,	Fayette.	O. W. Kennedy.	Scottdale.	John T. Hoover.	Olipphant Furnace.	P. R. R.
Kyle,	Fayette.	O. W. Kennedy.	Scottdale.	George E. Irvin.	Fairchance.	P. R. R.
Continental Coke Co.						
Continental No. 1,	Fayette.	O. W. Kennedy.	Scottdale.	C. C. Gadd.	Uniontown.	Coal Lick Run Branch of P. R. R.
Continental No. 2,	Fayette.	O. W. Kennedy.	Scottdale.	Enoch H. Abraham.	Uniontown.	Coal Lick Run Branch of P. R. R.
Continental No. 3,	Fayette.	O. W. Kennedy.	Scottdale.	Jas. A. Shannon.	Newcomer.	Coal Lick Run Branch of P. R. R.
Continental No. 4,	Fayette.	O. W. Kennedy.	Scottdale.	Jas. A. Shannon.	Newcomer.	Coal Lick Run Branch of P. R. R.
Southwest Connellsville Coke Co.						
Leckrone No. 1,	Fayette.	O. W. Kennedy.	Scottdale.	John Harding.	Leckrone.	B. & O.
Leckrone No. 2,	Fayette.	O. W. Kennedy.	Scottdale.	John Harding.	Leckrone.	B. & O.
Footdale,	Fayette.	O. W. Kennedy.	Scottdale.	F. W. Byrne.	New Salem.	Coal Lick Run Branch of P. R. R.
Baullington,	Fayette.	O. W. Kennedy.	Scottdale.	Benton Boyd.	New Salem.	Coal Lick Run Branch of P. R. R.
American Coke Co.						
Lambert,	Fayette.	O. W. Kennedy.	Scottdale.	H. N. Boyd.	Lamberton.	Coal Lick Run Branch of P. R. R.
Edenborn,	Fayette.	O. W. Kennedy.	Scottdale.	Thomas Evans.	Edenborn.	Coal Lick Run Branch of P. R. R.
Gates No. 1,	Fayette.	O. W. Kennedy.	Scottdale.	C. M. Gates.	Adah.	Coal Lick Run Branch of P. R. R.
Gates No. 2,	Fayette.	O. W. Kennedy.	Scottdale.	C. M. Gates.	Adah.	Coal Lick Run Branch of P. R. R.
Oliver & Snider Steel Co.						
Oliver No. 1,	Fayette.	F. C. Keighley.	Uniontown.	F. C. Keighley.	Uniontown.	B. & O. and P. R. R.
Oliver No. 2,	Fayette.	F. C. Keighley.	Uniontown.	F. C. Keighley.	Uniontown.	B. & O. and P. R. R.
Tessmer Coke Co.						
Griffin,	Fayette.	R. L. Martin.	Pittsburg.	John H. Bitts.	Masontown.	Coal Lick Run Branch of P. R. R.
Griffin,	Fayette.	R. L. Martin.	Pittsburg.	John H. Bitts.	Masontown.	Coal Lick Run Branch of P. R. R.
Griffin,	Fayette.	R. L. Martin.	Pittsburg.	John H. Bitts.	Masontown.	Coal Lick Run Branch of P. R. R.

TABLE J—Continued.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
W. J. Ranney.						
Ravine No. 1.	Fayette.	T. J. Mitchell.	Connelisville.	F. W. Cunningham.	Uniontown.	Coal Lick Run Branch of P. R. R.
Revere No. 2.	Fayette.	T. J. Mitchell.	Connelisville.	F. W. Cunningham.	Uniontown.	Coal Lick Run Branch of P. R. R.
Mt. Bradlock.	Fayette.	T. J. Mitchell.	Connelisville.	J. H. Klock.	Mt. Bradlock.	B. & O. and P. R. R.
A. L. Rooster & Co.						
Lanolin.	Fayette.	E. L. Stiner.	Scottsdale.	John M. White.	Waltersburg.	P. V. & C. B. of P. R. R.
Atlas Coke Co.						
Leavenworth.	Fayette.	James Henderson.	Uniontown.	James Henderson.	Uniontown.	P. V. & C. B. of P. R. R.
Cleveland.	Fayette.	James Henderson.	Uniontown.	James Henderson.	Uniontown.	E. & O.
Stewart Iron Co., Ltd.						
Stewart.	Fayette.	S. M. McClure.	Sharon.	Nathaniel McClure.	Uniontown.	B. & O.
Fayette Coke Co.						
Shannon.	Fayette.	C. E. Lenhart.	New Salem.	C. E. Lenhart.	New Salem.	Coal Lick Run Branch of P. R. R.
Isaac Taylor & Co.						
Mt. Hope.	Fayette.	Isaac Taylor.	Uniontown.	Isaac Taylor.	Uniontown.	P. V. & C. B. of P. R. R.
A. E. Humphries & Co.						
Chesler.	Fayette.	A. E. Humphries.	Scottsdale.	R. J. Humphries.	Vance's Mills.	P. V. & C. B. of P. R. R.
Colonial Coke Co.						
Colonial.	Fayette.	W. H. Warner.	Cleveland, O.	Joseph Baker.	Smock.	P. V. & C. B. of P. R. R.
Connelisville Coke Co.						
Connelisville No. 1.	Fayette.	Edwin N. Ohl.	New Castle.	H. M. Wilson.	Gans.	B. & O.
Joseph Wharton.						
Borne.	Fayette.	J. M. Taylor.	Uniontown.	Geo. A. Whetzel.	Smithfield.	B. & O.
Riverside Coal and Coke Co.						
Donald No. 1.	Fayette.	Isaac H. Brownfield.	Uniontown.	I. H. Brownfield.	Uniontown.	Coal Lick Run Branch of P. R. R.
Donald No. 2.	Fayette.	Isaac H. Brownfield.	Uniontown.	I. H. Brownfield.	Uniontown.	Coal Lick Run Branch of P. R. R.
Uniontown Coke Co.						
Smithfield.	Fayette.	B. B. Boyd.	Uniontown.	B. B. Boyd.	Uniontown.	B. & O.

TABLE I—Continued.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Cheat Haven Coal Co. Eagle.	Fayette.	J. T. Fawcett.	Cheat Haven	Geo. W. Gibson.	Cheat Haven,	B. & O.
John Snider & Co. Snider.	Fayette.	Thomas Clark.	Unlontown.	Thomas Clark.	Unlontown,	
Labell Iron Works. Labell.	Fayette.	Geo. H. Dixon.	Fredericktown.			River.

TABLE II—Gives the total number of tons of coal mined and tons of coke produced in each colliery, number of days worked, number of employees, number of employees killed and injured, number of kegs of powder, etc., used in the Fifth Bituminous District for the year ending December 31, 1902.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Total production of coke in tons.	Number of coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
H. C. Frick Coke Co.														
Leisenring No. 2.	Fayette.	.....	8,072	3,688	371,310	239,000	500	289	450	2	2	.....	1,365	67
Youngstown.	Fayette.	2,191	5,747	2,817	310,112	100,000	241	276	194	.....	1	.....	.....	39
Lemont No. 1.	Fayette.	26,236	14,461	1,845	197,970	102,000	227	285	228	2	1	.....	.....	30
Lemont No. 2.	Fayette.	.....	4,048	.....	262,555	171,000	350	281	335	.....	.....	.....	.....	38
Lemont No. 3.	Fayette.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Leitch.	Fayette.	.....	9,488	2,960	225,182	111,800	308	290	329	2	1	.....	.....	44
Redstone No. 1.	Fayette.	.....	11,722	2,713	291,044	184,000	445	284	412	.....	1	.....	.....	61
Redstone No. 2.	Fayette.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Olyphant.	Fayette.	.....	6,621	1,653	183,786	117,000	252	286	248	.....	.....	200	100	27
Whyran.	Fayette.	.....	1,747	487	106,159	69,000	130	184	132	2	.....	400	3,000	13
Kyle.	Fayette.	.....	3,017	6,951	240,877	150,900	306	286	308	1	1	.....	.....	51
Totals.	.....	21,486	64,940	24,017	2,698,955	1,274,700	2,759	274.55	2,685	11	7	690	4,465	370
Continental Coke Co.														
Continental No. 1.	Fayette.	.....	5,105	1,366	187,281	120,000	400	309	317	1	.....	.....	.....	51
Continental No. 2.	Fayette.	.....	5,633	1,349	233,910	121,000	300	291	285	1	.....	.....	60,350	36
Continental No. 3.	Fayette.	.....	5,560	3,888	241,185	194,000	300	284	292	1	1	.....	60,600	32
Totals.	.....	.....	16,318	6,553	662,376	435,000	1,000	291.33	894	3	1	.....	120,950	119
South West Connellsville Coke Co.														
Leckrone No. 1.	Fayette.	23,666	5,425	1,886	436,859	261,000	516	305	522	.....	1	15	84,250	60
Leckrone No. 2.	Fayette.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Footdale.	Fayette.	6,972	4,601	2,144	377,131	242,000	400	302	407	2	.....	.....	90,600	50

*Totals in this column are averages.

TABLE II--Continued.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employes, tons.	Total production of coal in tons.	Total production of coke in tons.	Number of coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Buffington,	Fayette,	.....	7,255	2,323	262,628	128,000	400	311	583	.....	9	.....	50,000	43
Totals,	.....	29,998	17,281	6,353	1,016,628	634,000	1,316	306	1,513	.....	12	15	224,850	153
American Coke Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lambert,	Fayette,	1,725	5,499	1,497	245,554	158,000	432	309	626	.....	5	.....	.....	52
Falmouth,	Fayette,	7,795	7,795	2,236	196,937	160,000	509	311	321	.....	2	.....	45,000	52
Gates No. 1,	Fayette,	.....	.....	.....	.....	.....	.....	.....	360	.....	2	.....	6,600	52
Gates No. 2,	Fayette,	175,046	11,212	998	187,256	.....	.....	.....	.....	1	.....	.....	.....	.....
Totals,	.....	176,863	24,506	4,791	629,747	318,000	932	298	1,307	5	7	.....	51,500	156
Oliver and Snider Steel Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Oliver No. 1,	Fayette,	.....	9,369	2,453	284,877	188,704	328	293.5	376	1	.....	.....	.....	31
Oliver No. 2,	Fayette,	.....	7,340	.....	327,102	213,175	480	283	332	.....	.....	.....	.....	36
Totals,	.....	.....	16,709	2,453	621,979	401,879	809	286.25	708	1	.....	.....	.....	67
Bessemer Coke Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Griffin No. 1,	Fayette,	799	200	200	264,115	177,927	410	298	561	.....	2	210	12,225	35
W. J. Rainey.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Revere No. 1,	Fayette,	13,000	2,560	3,600	150,000	87,600	600	310	476	2	2	25	20,000	20
Bessemer No. 2,	Fayette,	.....	.....	.....	285,000	190,000	.....	289	116	.....	1	.....	.....	.....
Mt. Braddock,	Fayette,	9,500	11,120	5,360	148,400	81,735	440	310	275	2	1	.....	450	36
Totals,	.....	2,500	13,680	8,360	582,400	259,335	1,040	293	807	4	4	25	20,450	56
A. L. Kelsor & Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lincoln,	Fayette,	1,851	2,931	1,351	179,470	119,645	300	292	279	1	1	.....	.....	30

Lafayette, Crossland,	Atlas Coke Co.	Fayette,	190	823	1,023	97,146	65,361	111	312	113	20	200	12
Totals,		Fayette,	2,639	411	68	82,408	55,140	100	310	100	16	200	8
Stewart, Stewart Iron Co., Ltd.		Fayette,	2,489	1,234	1,031	179,554	129,501	211	311	213	36	220	21
Shamrock, Fayette Coke Co.		Fayette,		4,709	534	105,070	85,152	155	287	175	1		11
Mt. Hope, Isaac Taylor & Co.		Fayette,	3,620	2,219	1,440	103,161	63,282	200	278	146	2	1,650	5,775
Chester, A. E. Humphries,		Fayette,		365	300	75,088	49,604	80	310	79		259	100
Colonial, Colonial Coke Co.		Fayette,	65	975	100	45,000	33,750	54	300	74		25	200
Connellsville, Connellsville Coke Co.		Fayette,		500	600	62,000	40,600	100	310	90	1	1,200	130
Boone, Joseph Wharton,		Fayette,			11	49,183	37,378	100	272	91		122	15,100
Donald No. 1, Riverview Coal and Coke Co.		Fayette,			478	65,914	44,776	86	279	91		10	6
Donald No. 2, Fayette,		Fayette,	\$1,655	1,700	200	155,680	43,275	78	285	167	2		17
Totals,		Fayette,	\$1,655	1,700	200	155,680	43,275	60	236	60			
Smithfield, Unlontown Coke Co.		Fayette,						138	275.5	227	2		17
Parshall Nos. 1 and 2, Puritan Coke Co.		Fayette,	7,850	50	150	23,050	10,000	19	310	37		100	3
Ronco, Sharon Coke Co.		Fayette,	38,000	50	75	68,779	22,071	32	306	56	1	2	10,000
Florence, Bute Iron Coal and Coke Co.		Fayette,	24,839	4,860	230	29,929							8
Acme, Penn Coke Co.		Fayette,	900	25	50	2,475	1,200		155	102		7,100	16
Hero, Hero Coal and Coke Co.		Fayette,	18,700	200	400	49,300	20,000	20	300	26			4
Percy, Percy Mining Co.		Fayette,	41,000	300	200	64,000	16,000	57	313	83		2	50
		Fayette,	9,100	650	1,550	31,705	15,305	32	305	71		400	10
		Fayette,						49	311	55	1		6

*Totals in this column are averages.

TABLE II.—Continued.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Total production of coke in tons.	Number of coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Eleanor Coal and Coke Co.	Fayette.	1,899			15,133	9,329	18	292	31	1	1	90	3,600	2
Eleanor.	Fayette.													
Sackett Coal and Coke Co.	Fayette.	1,109	100	100	25,500	16,660	30	369	45			30	100	4
Sackett.	Fayette.													
Anniemyra.	Fayette.				2,400	1,600	32	49	25					3
Hanna.	Fayette.	58,817	46	50	28,913									4
Christiansburg.	Fayette.	58,515	2,708	733	78,006			132 5	40	1		240		8
Blodgett.	Fayette.	64,938	271	32	65,241	15,065	31	245	98	2		400	800	6
Shook.	Fayette.	50,527	379	99	51,005			149 5	70	4		600		9
Totals.		290,827	3,404	914	224,065	15,050	31	172.12	280	3	6	1,740	800	27
M. R. C. & Co.														
Washington.	Fayette.	262,872	1,713	12	265,597									14
Little Alton.	Fayette.	26,028			26,065			268	152	1	4	782		3
Alton.	Fayette.	389,664	4,126		393,790			178	44			81		22
Snow Hill.	Fayette.	158,692	1,282		159,974			266	242	1	2	1,438		16
Anchor.	Fayette.	77,794	2,143		79,937			214	166		1	480		12
Stony Hill.	Fayette.	65,944	2,025		67,969			242	60			278		19
Charmont.	Fayette.	334,861	2,012	216	336,877			257	274		1	1,788		22
Albany.	Fayette.	176,317	1,641	305	177,963			200	64			776	700	16
Crowthers.	Fayette.	115,317	1,181	119	116,502			179	118		1	436		19
Totals.		1,691,405	14,309	767	1,616,392			216.33	1,351	9	12	6,011	700	126
Peoples' Coal Co.														
Pike.	Fayette.	292,967	17,828	708	412,606			271	375	3	3	1,400		2

TABLE II—Continued.

Names of Operators and Collieries.	County.	Number of Boilers.			Locomotives.			Total horse power.	Number steam engines of all classes.	Total horse power.	Number pumps delivering water to surface.	Capacity in gallons per minute.	Quantity delivered to surface per minute—gallons.	Number electric dynamos.	Number air compressors.
		Number of Boilers.			Locomotives.										
		Cylindrical.	Horse power.	Tubular.	Horse power.	Steam.	Electric.								
H. C. Erick Coke Co.	Fayette.	29	1,429	51	4,186	5,315	9	33	3,510	23	9,688	4,334	4,334		3
Continental Coke Co.	Fayette.			20	1,960	1,960		13	1,410	4	1,122	425	425		2
South West Connellsville Coke Co.	Fayette.			16	2,400	2,400		13	1,560	5	1,438	515	515		3
American Coke Co.	Fayette.			19	2,502	2,502	6	23	1,631	5	1,747	591	591		3
Oliver and Smiler Steel Co.	Fayette.			16	840	840	3	7	960	2	700	500	500		1
Bessemer Coke Co.	Fayette.			20		20									
W. J. Ratney	Fayette.	3	800	6	750	1,550	1	7	1,500	4	1,050	600	600	3	4
A. L. Keister & Co.	Fayette.	4	225			225	1	6	650	1	570	500	500		1
Atlas Coke Co.	Fayette.			2	55	55		2	45						
Stewart Iron Co., Ltd.	Fayette.			3	450	450		4	514	3	438	300	300		1
Fayette Coke Co.	Fayette.			2	180	180		2	120	1	196	52	52		
Isaac Taylor & Co.	Fayette.			1	40	40				1	75	50	50		
A. E. Humphries & Co.	Fayette.	3	110			110		3	38	3	300	125	125		
Colonial Coke Co.	Fayette.	2	76			76		1	60						
Connellsville Coke Co.	Fayette.			3	75	75	1	1	60	1	75	50	50		
Joseph Wharton	Fayette.														
Riverside Coal and Coke Co.	Fayette.	1	40	2	106	146		3	206					1	
Uniontown Coke Co.	Fayette.														
Puritan Coke Co.	Fayette.			3	900	900		1	6						
Sharon Coke Co.	Fayette.							3	806	3	810	600	600	1	1
Bute Run Coal and Coke Co.	Fayette.			1	80	80									
Penn Coke Co.	Fayette.			1	16	16		1	40				30		
Hero Coke Co.	Fayette.			3	45	45				2	40				
Perry Mining Co.	Fayette.														
Eleaser Coal and Coke Co.	Fayette.					50									
Sackett Coal and Coke Co.	Fayette.	1	50									80	40		
Leckrone Coke Co.	Fayette.														
Leckrone Coal and Coke Co.	Fayette.	1	35	22	1,730	1,765	2	21	1,245	10	1,575	855	855	4	1
M. R. C. and Coke Co.	Fayette.	1	60	7	680	729		9	858	2	150	100	100	2	1
Pittsburg Coal Co.	Fayette.							3	375				300		
Lake Erie Gas Coal and Coke Co.	Fayette.			2	250	250									

	1	75	4	500	575		1	7	765	1	60	40	2	25
Peoples' Coal Co.,														
Fayette,														
Cheat Haven Coal Co.,														
Fayette,														
John Snider & Co.,														
Fayette,														
Labell Iron Works,														
Totals,	54	2,620	188	17,725	20,345	—	21	7	16,409	75	20,445	10,107	27	25

Footdale,	1	1	1	199	4	.....	4	.....	22	4	12	2	341	1	3	4	4	100	2	52	106	467
Buffington,	1	1	3	300	.....	.....	.....	.....	25	5	37	10	585	1	2	6	7	140	2	40	158	553
Totals,	4	1	4	490	7	220	.....	.....	73	9	87	12	914	3	7	20	15	440	7	107	599	1,513
American Coke Co.																							
Lambert,	1	1	3	308	.....	.....	.....	.....	20	11	1	70	415	1	3	7	8	148	2	42	211	696
Glendon,	1	1	2	22	9	102	.....	.....	13	4	26	.....	194	1	2	6	10	94	2	12	157	321
Gates No. 1,	1	1	2	209	.....	.....	.....	.....	26	3	63	4	362	1	2	8	8	.....	2	57	58	300
Gates No. 2, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals,	3	3	7	530	9	102	.....	.....	64	18	92	74	911	3	7	21	26	242	6	91	396	1,307
Oliver & Snider Steel Co.																							
Oliver No. 1,	1	1	3	155	.....	.....	.....	.....	20	1	.....	38	219	1	1	9	5	135	2	5	157	376
Oliver No. 2,	1	1	4	170	.....	.....	.....	.....	27	3	.....	41	247	.....	1	7	4	126	3	4	145	392
Totals,	2	2	7	325	.....	.....	.....	.....	47	4	.....	79	466	1	2	16	9	261	5	9	302	768
Bessemer Coke Co.																							
Griffin,	2	.....	.....	175	.....	.....	.....	.....	13	3	10	20	223	1	3	4	2	220	1	107	398	561
Griffin, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Griffin, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
W. J. Ratney.																							
Revere No. 1,	1	.....	.....	80	1	.....	.....	.....	10	.....	8	.....	101	1	.....	4	4	160	6	200	375	476
Revere No. 2,	1	.....	.....	100	.....	.....	.....	.....	10	1	4	.....	116	.....	.....	.....	.....	.....	.....	.....	.....	116
Mc Braddock,	1	.....	3	110	.....	.....	.....	.....	20	2	10	5	151	1	1	5	9	100	3	5	124	275
Totals,	3	3	290	1	1	40	3	22	5	368	2	1	9	13	260	9	205	499	867
A. L. Kelster & Co.																							
Lincoln,	1	1	2	125	3	.....	.....	.....	15	2	5	19	176	1	3	12	4	75	3	5	103	279
Atlas Coke Co.																							
Lafayette,	1	.....	.....	50	.....	.....	.....	.....	6	.....	4	2	63	.....	1	1	1	40	2	5	50	113
Crossland,	1	.....	.....	45	.....	.....	.....	.....	4	.....	2	1	53	1	1	1	1	40	1	2	47	100
Totals,	2	.....	.....	95	.....	.....	.....	.....	10	.....	6	3	116	1	2	2	2	80	3	7	97	213
Stewart Iron Co., Ltd.																							
Stewart,	1	.....	1	65	.....	.....	.....	.....	7	.....	11	4	89	1	1	2	3	75	1	3	86	175
Shamrock,	1	.....	.....	51	.....	.....	.....	.....	8	2	10	.....	75	1	1	2	3	60	1	3	71	146
Issue Taylor & Co.																							
Mt. Hope,	1	.....	.....	44	.....	.....	.....	.....	5	.....	2	.....	52	1	.....	1	1	21	1	2	27	79
A. E. Humphries & Co.																							
Chester,	1	.....	.....	33	.....	.....	.....	.....	3	.....	2	1	40	1	1	1	4	22	2	3	31	74
Colonial Coke Co.																							
Colonial,	1	.....	.....	46	.....	.....	.....	.....	4	.....	.....	.....	53	1	1	1	1	24	1	8	37	90

Bute Run Coal and Coke Co. Florence,.....	1	.....	12	.....	.....	.....	.....	.....	.....	1	.....	1	15	1	1	.....	7	1	1	11	26
Penn. Coke Co. Acme,.....	1	.....	39	.....	.....	.....	.....	.....	.....	5	.....	4	49	1	.....	1	30	2	.....	34	83
Hero Coal and Coke Co. Hero,.....	1	40	5	1	2	4	53	1	1	1	12	2	18	71		
Percy Mining Co. Percy,.....	1	.....	18	.....	.....	.....	.....	.....	.....	3	.....	6	28	1	1	1	17	.....	7	27	55
Eleonor Coal and Coke Co. Eleonor,.....	1	.....	12	.....	.....	.....	.....	.....	.....	2	1	.....	16	1	.....	1	10	1	2	15	31
Sackett Coal and Coke Co. Sackett,.....	1	.....	20	.....	.....	.....	.....	.....	.....	2	.....	.....	5	28	1	1	12	1	1	17	45
Leekrone Coke Co. Annemyn,.....	1	.....	9	.....	.....	.....	.....	.....	.....	1	.....	.....	11	1	1	.....	8	.....	4	14	25
Pittsburg Coal Co. Hanna,.....	1	.....	36	.....	.....	.....	.....	.....	.....	4	.....	1	36	.....	.....	1	.....	.....	3	4	40
Grindstone, Braham,.....	1	.....	15	4	44	.....	.....	.....	.....	7	1	.....	77	.....	1	2	.....	.....	21	98	40
Shook,.....	1	.....	4	.....	.....	.....	.....	.....	.....	4	.....	2	60	.....	1	2	.....	.....	10	70	76
Totals,.....	4	2	117	4	44	20	1	4	1	231	1	3	7	9	12	3	14	49	250	
M. R. C. C. & Coke Co. Washington,.....	1	2	130	6	14	2	5	126	1	2	3	1	3	16	152	
Little Alps, Alco,.....	1	1	30	3	37	1	1	1	1	9	3	7	44	
Snow Hill, Anchor,.....	1	2	130	11	20	2	5	221	1	1	1	4	1	10	21	242	
Stony Hill, Chamoni,.....	1	1	40	4	1	149	1	1	2	3	1	9	17	166		
Albany, Crowthers,.....	1	1	1	10	2	48	1	1	1	1	1	5	11	60	60	
Totals,.....	1	2	227	18	4	6	216	1	1	2	2	1	5	12	94	94
Peoples' Coal Co. Pike,.....	9	15	985	28	90	19	6	198	1	3	3	1	1	9	15	271
Lake Erie Gas Coal and Coke Co.,.....	1	2	300	10	20	4	3	4	104	1	2	1	8	14	118	118
Sumner,.....	1	1	19	4	56	7	2	9	1	104	1	2	4	1	4	12	116	116
Cheat Haven Coal Co. Eagle,.....	1	55	5	4	65	1	1	1	7	10	75	75
Indo, Snider & Co. Snider,.....	7	1	8	1	1	2	10	10	10

Recapitulation.

Names of Operators and Colliers.	County.	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.						Grand total, inside and outside.				
		Mine foremen.	Assistant mine foremen.	Pit bosses.	Miners.	Machine runners.	Machine loaders.	Machine scrapers.	Drivers and runners.	Door boys and helpers.	Company men.	All other employes.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.		Coke employes.	Book-keepers and clerks.	All other employes.	Total outside.
H. C. Friel Coke Co.,	Fayette.	10	1	19	1,118				173	20	75	94	1,311	8	15	41	65	336	17	16	14	2,625
Continental Coke Co.,	Fayette.	4	1	6	433				51	11	4	61	550	3	4	14	13	208	88	35	3	894
Southwest Connelsville Coke Co.,	Fayette.	4	1	4	400				73	19	87	12	914	1	7	29	15	440	107	236	1,313	
American Coke Co.,	Fayette.	3	3	7	530				64	18	92	74	911	3	1	21	25	312	91	399	1,367	
Oliver & Snyder Steel Co.,	Fayette.	3	2	7	325				47	4		79	466	1	1	16	9	261	302	49	788	
W. J. Rainey,	Fayette.	1	1	2	290				40	3	22	15	368	1	1	9	13	290	206	193	1,073	
A. L. Keister & Co.,	Fayette.	1	1	2	125				13	2	16	20	176	1	1	12	7	75	107	236	1,367	
Bessemer Coke Co.,	Fayette.	1	1	1	170				13		16	20	176	1	1	12	7	75	107	236	1,367	
Atlas Coke Co.,	Fayette.	1	1	1	85				13		16	20	176	1	1	12	7	75	107	236	1,367	
Stewart Iron Co.,	Fayette.	1	1	1	57				13		16	20	176	1	1	12	7	75	107	236	1,367	
Fayette Coke Co.,	Fayette.	1	1	1	57				13		16	20	176	1	1	12	7	75	107	236	1,367	
Isaac Taylor & Co.,	Fayette.	1	1	1	57				13		16	20	176	1	1	12	7	75	107	236	1,367	
A. E. Humphries & Co.,	Fayette.	1	1	1	57				13		16	20	176	1	1	12	7	75	107	236	1,367	
Colman Coke Co.,	Fayette.	1	1	1	57				13		16	20	176	1	1	12	7	75	107	236	1,367	
Colman Coke Co.,	Fayette.	1	1	1	57				13		16	20	176	1	1	12	7	75	107	236	1,367	
Joseph Wharton,	Fayette.	1	1	1	57				13		16	20	176	1	1	12	7	75	107	236	1,367	
Riverside Coal and Coke Co.,	Fayette.	2	1	1	40				6	1	12	6	48	1	1	1	1	38	1	1	1	227
Uniontown Coke Co.,	Fayette.	1	1	1	18				1	1	1	4	21	1	1	1	1	5	1	1	1	42
Uniontown Coke Co.,	Fayette.	1	1	1	18				1	1	1	4	21	1	1	1	1	5	1	1	1	42
Sharon Coke Co.,	Fayette.	1	1	1	28				1	1	1	4	21	1	1	1	1	5	1	1	1	42
Bate Run Coal and Coke Co.,	Fayette.	1	1	1	12				1	1	1	4	21	1	1	1	1	5	1	1	1	42
Penn Coke Co.,	Fayette.	1	1	1	39				1	1	1	4	21	1	1	1	1	5	1	1	1	42
Hero Coal and Coke Co.,	Fayette.	1	1	1	39				1	1	1	4	21	1	1	1	1	5	1	1	1	42
Perry Mining Co.,	Fayette.	1	1	1	18				1	1	1	4	21	1	1	1	1	5	1	1	1	42
Eleanor Coal and Coke Co.,	Fayette.	1	1	1	12				1	1	1	4	21	1	1	1	1	5	1	1	1	42
Sackett Coal and Coke Co.,	Fayette.	1	1	1	29				1	1	1	4	21	1	1	1	1	5	1	1	1	42

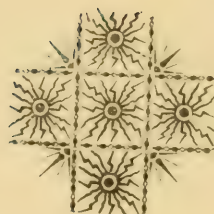
Lake Erie Gas Coal and Coke Co.,	18	15	18	16	19	21	23	24	18	23	22	21	238
Peoples' Coal Co.,	26	15	25	20	19	19	23	24	25	23	22	22	271
Cheat Haven Coal Co.,	20	14	16	20	18	22	22	24	20	22	20	22	239
John Snider & Co.,	24	23	24	26	10	10	15	16	19	27	22	25	214
Labell Iron Works,											4	26	30
Totals,	23.91	20.61	22.93	23.83	24.14	23.64	25.08	24.94	24.33	25.44	22.47	24.16	265.71

TABLE IV—List of fatal accidents that occurred in and about the mines of the Fifth Bituminous District for the year ending December 31, 1902.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan. 1	Steve Hustack,	Austrian, ..	Grassier,	11	5			Leisnering No. 2, ...	Fayette,	Instantly killed by falling down a shaft.
19	Andy Brinza,	Slav,	Miner,	23	M.	1	5	Wynn,	Fayette,	Instantly killed by roof coal and slate.
15	Edward McCormick, ..	American, ..	Laborer,	31	5			Grindstone,	Fayette,	Neck and back dislocated; caught between car and roof.
18	James Ramsey,	American, ..	Driver,	21	5			Wynn,	Fayette,	Instantly killed; crushed between car and rib.
21	Kern Navack,	Austrian, ..	Miner,	22	5			Leisnering No. 2, ...	Fayette,	Instantly killed by fall of slate.
Feb. 6	Walter West,	American, ..	Miner,	25	M.	1	1	Continental No. 3, ...	Fayette,	So seriously bruised on the ribs by a fall of slate; died on the 11th.
27	Joe Crats,	Pole,	Miner,	28	M.	1	1	Continental No. 4, ...	Fayette,	Instantly killed by a fall of coal and slate.
March 7	Martin Kondridge,	Austrian, ..	Miner,	24	5			Lemont No. 1,	Fayette,	Crushed to death by a fall of coal and slate.
24	Jack Oberly,	Slav,	Miner,	31	M.	1	5	Oliver No. 1,	Fayette,	Killed by fall of coal and slate.
April 1	Jack Vachy,	Austrian, ..	Laborer,	22	5			Cates,	Fayette,	Crushed between car and rib.
8	Lewis Koschnider,	Hungarian, ..	Miner,	36	M.	1		Leath,	Fayette,	Instantly killed by a fall of slate.
13	John Spitzer,	Hungarian, ..	Miner,	49	M.	1	5	Mt. Bradlock,	Fayette,	Instantly killed; crushed between car and rib.
17	John Hornorack,	Slav,	Laborer,	18	5			Pike,	Fayette,	Instantly killed by car running on him.
May 17	John Benson,	Slav,	Laborer,	25	5			Allee,	Fayette,	Crushed by a fall of slate; died 7 hours later.
June 3	James H. Eaton,	American, ..	Mine foreman, ..	38	M.	1	3	Grindstone,	Fayette,	Falls from car by an explosion of fire-damp; died ten hours later.
5	Amos Carlson,	Swede,	Electrician,	32	M.	1	3	Pike,	Fayette,	Fatally crushed between electric motor and rib.
11	Andy Grien,	Slav,	Miner,	25	M.	1	4	Kyle,	Fayette,	Instantly killed by a fall of slate.
29	Eugene Hall,	American, ..	Fire boss,	25	5			Redstone No. 2, ...	Fayette,	Crushed between car and rib; died twelve hours later.
35	Thomas Green,	English, ..	Driver,	35	5			Edenborn,	Fayette,	Fatally crushed between car and rib.
July 1	Mike Felix,	Austrian, ..	Miner,	39	5			Mt. Bradlock,	Fayette,	Head crushed between car and rib.
22	Mike Dustin,	Slav,	Miner,	33	M.	1	5	Redstone No. 2, ...	Fayette,	Instantly killed by fall of coal and slate.

TABLE V.—List of non-fatal accidents that occurred in and about the mines of the Fifth Bituminous District for the year ending December 31, 1902.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan. 13	Charles Hawthorne.	Irish.	Machine helper.	39	S	Donald No. 1.	Fayette.	Foot caught by machine, necessitating amputation.
27	George Luketz.	Slav.	Miner.	19	S	Colonial.	Fayette.	Knee cap dislocated; caught between car and rib.
Feb. 8	Thos. Hannaford.	Welsh.	Roque piler.	43	M	Shamrock.	Fayette.	Bruised, caught between car and rib.
22	Mike Stepien.	Austrian.	Miner.	38	M	Parshall.	Fayette.	Bruised; caught between car and rib.
25	Lewis Blaine.	Slav.	Driver.	29	S	Lambert.	Fayette.	Arm broken; caught between car and rib.
March 4	John Greesick.	P. P.	Miner.	36	M	Sumner.	Fayette.	Face and hand burned; was preparing cartridge in open light between car and rib.
7	John Henderson.	American.	Driver.	22	S	Revere No. 2.	Fayette.	Leg broken; caught between car and rib.
10	Edward Lysle.	Austrian.	Miner.	50	M	Washington.	Fayette.	Bruised about body by a fall of slate.
17	Edgar Nodge.	Austrian.	Driver.	39	M	Washington No. 1.	Fayette.	Bruised by a fall of coal and slate.
26	William Cooper.	P. P.	Miner.	16	S	Buffington.	Fayette.	Bruised by mine car.
28	Edmund Gable.	Slav.	Miner.	36	M	Continental No. 3.	Fayette.	Injured between car and rib.
29	May Gohish.	Slav.	Miner.	18	S	Washington.	Fayette.	Injured by a fall of slate.
April 5	Charles Craig.	American.	Miner.	22	M	Sumner.	Fayette.	Injured by flying coal, due to shot blowing through rib.
5	Gust Proudly.	Finlander.	Miner.	22	S	Washington.	Fayette.	Ankle broken by a fall of slate.
5	Osker Gasky.	Finlander.	Miner.	22	S	Washington.	Fayette.	Injured by dilly trip.
9	Lester Walters.	American.	Driver.	24	M	Pike.	Fayette.	Injured; caught between car and rib.
15	Solomon Moose.	American.	Miner.	51	M	Sumner.	Fayette.	Leg fractured by a fall of slate.
26	William Owens.	American.	Driver.	26	M	Griffin.	Fayette.	Collar bone broken; caught between car and rib.
May 5	Charles Crank.	American.	Driver.	22	M	Sumner.	Fayette.	Hip dislocated; slipped in front of car.
9	John Hortmyer.	American.	Tramman.	17	S	Eastdale.	Fayette.	Injured; fall of spruget chain on tippie.
17	Nelson Hartford.	American.	Tramman.	23	M	Grindstone.	Fayette.	Injured; slipped and fell between cars.
18	Fony Williams.	Italian.	Driver.	23	M	Grindstone.	Fayette.	These ribs broken by cars.
19	John Shaw.	American.	Driver.	31	M	Griffin.	Fayette.	Broken arm and hip; caught between car and rib.
20	John Michkl.	Slav.	Miner.	45	S	Alamy.	Fayette.	Leg broken by a fall of coal.
29	Charles Haverschick.	R. German.	Miner.	29	S	Smock.	Fayette.	Seriously cut and bruised by a fall of coal and slate.
23	Michael Costello.	Irish.	Tramman.	32	S	Buffington.	Fayette.	Leg broken by a fall of slate.



Sixth Bituminous District.

CAMBRIA AND SOMERSET COUNTIES.

Johnstown, Pa., March 2, 1903.

Hon. James W. Latta, Secretary Internal Affairs, Harrisburg, Pa.

Sir: I have the honor of presenting herewith my annual report as Inspector of Mines for the Sixth Bituminous District of Pennsylvania for the year ending December 31, 1902.

I regret to report an increase in the number of fatal accidents during the year just closed, which was caused by the disaster in the Rolling Mill mine at Johnstown, on July 10th. But almost as much to be deplored as the disaster itself, was the manner in which it occurred, some remarks on which will be found in another part of this report.

The production of coal last year increased from 6,848,954 tons to 8,410,861 tons, as compared with 1901, and the number of employes from 10,066 to 12,111 in the same period.

Embodied in the report will be found a number of useful tables.

A few remarks on accidents and the general condition of the mines in the district are also appended.

All of which is respectfully submitted.

J. T. EVANS,
Inspector.

Summary of Statistics for 1902.

Number of mines in district,	93
Number of mines in operation during 1902,	88
Number of tons of coal produced,	8,410,861
Number of tons shipped to market,	8,192,880
Number of tons sold at mines to local trade,	39,462
Number of tons consumed at mines in generating steam and heat,	178,519
Number of coke ovens in the district,	37

Number of coke ovens in operation during 1902,	12
Number of tons of coke produced,	300
Number of tons of coal used in manufacture of coke,...	480
Number of tons produced by pick mining,	4,206,821
Number of tons produced by compressed air machines,.	4,061,750
Number of tons produced by electrical machines,	142,290
Number of persons employed inside the mines,	10,862
Number of persons employed outside, including coke workers,	1,249
Number of persons employed at manufacture of coke,..	3
Number of fatal accidents inside the mines,	134
Number of tons produced for each fatal accident inside,	61,343
Number of persons employed per fatal accident inside,.	81
Number of wives made widows by fatal accidents,	80
Number of children orphaned by fatal accidents,	168
Number of non-fatal accidents inside of mines,	30
Number of persons employed per non-fatal accident in- side,	362
Number of compressed air locomotives used inside,	4
Number of electric Motors used inside,	72
Number of fans used for ventilation,	60
Number of furnaces used for ventilation,	26
Number of gaseous mines in operation during 1902,	5
Number of non-gaseous mines in operation during 1902,.	88
Number of new mines opened in 1902,	11
Number of old mines abandoned during 1902,	1

A. Production of Coal During the Year, 1902.

Names of Companies.	Tons.
Berwind-White Coal Mining Co.,	3,307,678
Webster Coal Company,	546,146
Puritan Coal Co.,	241,697
Cambria Steel Co.,	894,811
W. H. Piper & Co.,	224,109
Coulter & Huff,	278,022
A. J. Haws & Sons, Limited,	46,014
Loyalhanna Coal and Coke Co.,	238,322
Henrietta Coal Co.,	156,835
A. F. Clark & Co.,	59,078
Maderia Coal Co.,	44,083
Logan Coal Co.,	103,730
Somerset Coal Co.,	282,439

Cambria Coal Mining Co.,	91,858
C. A. Buch,	84,834
S. Hamilton Coal Co.,	23,501
D. Laughman & Leahy,	36,600
Bando Coal Co.,	12,334
Bethel Coal Co.,	25,038
Munser Coal Co.,	6,431
D. Laughman,	48,988
Ferndale Coal Co.,	17,213
Whitney, Kemmer & Holts,	55,110
Baltzell Coal Co.,	41,900
Lorain Steel Co.,	22,470
Somerset Mining Co.,	32,910
Lilly Coal Co.,	88,163
Llewellyn & Yeagley,	23,000
Moshannon Coal Co.,	34,992
Murdock Brothers,	27,111
Reading Coal and Iron Co.,	81,072
Pennsylvania Bituminous Coal Co.,	62,573
Priscilla Coal Co.,	42,821
J. W. Mentzer,	28,456
Plymouth Coal Mining Co.,	12,992
Merchants' Coal Co.,	65,040
Samuel Styer,	25,337
Stineman Coal Mine Co.,	246,475
Stineman Coal and Coke Company,	203,445
South Fork Coal Co.,	151,065
Standard Coal Co.,	50,807
Robinson & Irwin,	26,505
Shamrock Coal Co.,	20,300
Sonman Shaft Coal Co.,	93,960
Valley Coal Co.,	11,000
Wells Creek Coal Co.,	54,540
T. S. Shoemaker & Co.,	67,202
George Pierce & Sons,	50,953
Central Coal Co.,	6,324
Mountain Coal Co.,	527
W. J. Williams,	14,050

Total,	8,410,861
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B. Showing the number of fatal and non-fatal accidents inside and outside the mines; number of tons of coal produced per fatal and non-fatal accident inside the mines; number of persons employed inside and outside; and the number employed inside and outside for every fatal and non-fatal accident for each company during 1902.

Name of Companies.	Number of lives lost inside.	Total number of lives lost.	Number severely injured inside.	Total number severely injured.	Tons of coal produced per each life lost inside.	Tons of coal produced per serious injury inside.	Number of employees inside of mines.	Number of employees outside of mines.	Total number employed.	Number of employees inside for each life lost.	Number of employees inside for each severe injury.
Berwind-White Coal Mine Co.,	14	14	12	12	236,262	275,639	3,754	426	4,180	298	312
Webster Coal Co.,	1	1	5	5	54,146	104,269	898	150	898	898	107
Yamhill Steel Co.,	113	113	1	1	107,118	294,811	839	119	854	854	857
W. H. Burr & Co.,	1	1	1	1	294,109	278,022	286	30	216	352	352
Quinn & Ruff,	2	2	2	2	119,161	119,161	312	22	334	156	156
London Coal and Coke Co.,	2	2	2	2	119,161	78,417	241	33	274	156	156
Homestead Coal Co.,	1	1	2	2	84,834	141,219	381	43	424	107	191
Samuel Coal Co.,	1	1	1	1	84,834	141,219	197	9	116	107	107
C. A. Pugh,	1	1	1	1	84,834	141,219	197	9	116	107	107
D. Leachman,	1	1	1	1	84,834	141,219	197	9	116	107	107
Mashburn Coal Co.,	1	1	1	1	84,834	141,219	197	9	116	107	107
Merchants Coal Co.,	1	1	1	1	84,834	141,219	197	9	116	107	107
Stidman Coal Mine Co.,	1	1	1	1	84,834	141,219	197	9	116	107	107
Sonman Shays Coal Co.,	1	1	1	1	84,834	141,219	197	9	116	107	107
T. S. Shoemaker & Co.,	1	1	1	1	84,834	141,219	197	9	116	107	107
Standard Coal Co.,	1	1	1	1	84,834	141,219	197	9	116	107	107
Totals and averages.	134	134	30	30	56,987	26,987	65	2	67	87	88

E. Occupations of Employees Killed or Fatally Injured Inside and Outside the Mines of the Sixth Bituminous District During 1902.

[illegible]

G. Nationality of Employees Killed or Fatally Injured Inside and Outside the
Mines During 1902.

	Americans.	English.	Welsh.	Irish.	Germans.	Poles.	Hungarians.	Italians.	Slavs.	Austrians.	Russians.
January,						1	1			1	
February,						1					
March,						1		1			
April,											
May,							1		2		
June,	2	5	2	2	4	5		6	26	11	1
July,						3	1				
August,							1				
September,							1				
October,	1						1				
November,											
December,						2					
Totals,	3	5	2	2	4	6	5	7	28	12	1

H. Nationality of Employees Severely Injured Inside and Outside the Mines
During 1902.

	Americans.	English.	Scotch.	Germans.	Poles.	Hungarians.	Slavs.	Lithuanians.	French.	Grand total
January,	3									3
February,	1		1			1				3
March,	1				1					2
April,					2		1	2		5
May,	1			1						2
June,		1							1	2
July,	1									1
August,										
September,					1	1				2
October,						1	3			4
November,		1								1
December,	1	1				1				3
Totals,	9	3	1	1	5	4	4	2	1	30

I. Giving names of operators and mines, kind of openings, type and size of fans; size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each employee per minute in Sixth Bituminous District for the year 1902.

Names of Operators and Mines.	Kind of opening.	Class of air.	Method of ventilation.	Diameter and width of fan.	In feet.	Water gauge developed in inches.	Name of fan.	Power used.	Area of furnace bars in square feet.	Number of air splits of air currents.	Number of cubic feet of air per minute entering the mine at inlet.	Total quantity of air per minute circulating in all the splits in cubic feet.	Number of cubic feet per minute passing out at outlet.	Number of persons employed inside.	Average number of cubic feet per minute provided for each person.
Benward-White C. M. Co.,	Euoka No. 30.	Non-gas.	Fan.	12' x 10'	5 1/2	2 1/2	Capell.	Steam.	.....	.....	51,200	85,000	92,000	519	167
	Euoka No. 31.	Non-gas.	Fan.	14' x 13 1/2'	4	4	Capell.	Steam.	.....	.....	66,000	62,000	67,000	487	135
	Euoka No. 32.	Non-gas.	Fan.	11' x 6 1/2'	3	6	Capell.	Steam.	.....	.....	78,000	63,000	76,000	429	164
	Euoka No. 33.	Non-gas.	Fan.	11' x 4 1/2'	3	4	Capell.	Steam.	.....	.....	71,000	62,000	72,000	376	188
	Euoka No. 34.	Non-gas.	Fan.	12 3/4' x 6'	3	3	Capell.	Steam.	.....	.....	78,000	68,000	72,000	553	132
	Euoka No. 35.	Non-gas.	Fan.	16' x 8'	6	1 1/2	Capell.	Steam.	.....	.....	78,000	68,000	76,000	594	129
	Euoka No. 36.	Non-gas.	Fan.	16' x 8'	6	1 1/2	Capell.	Steam.	.....	.....	81,000	68,000	82,000	590	126
	Euoka No. 37.	Non-gas.	Fan.	16' x 8'	6	1 1/2	Capell.	Steam.	.....	.....	81,000	68,000	82,000	590	126
	Euoka No. 38.	Non-gas.	Fan.	16' x 8'	6	1 1/2	Capell.	Steam.	.....	.....	81,000	68,000	82,000	590	126
	Euoka No. 39.	Non-gas.	Fan.	16' x 8'	6	1 1/2	Capell.	Steam.	.....	.....	81,000	68,000	82,000	590	126
Webster Coal and Coke Co.,	Yellow Run.	Non-gas.	Fan.	16' x 8'	5 1/2	1 1/2	Garbal.	Steam.	.....	.....	55,000	50,000	52,000	539	372
	Webster No. 1.	Non-gas.	Fan.	7 1/2' x 13'	1 1/2	4 1/2	Stine & Capell.	Electric.	.....	.....	25,000	25,000	28,800	87	287
	Webster No. 2.	Non-gas.	Fan.	10' x 8'	2 1/2	50	Stine.	Steam.	.....	.....	23,000	23,000	24,000	102	200
	Webster No. 3.	Gasous.	Fan.	16' x 8'	4	2 1/2	Garbal.	Steam.	.....	.....	48,000	46,000	46,000	256	180
	Webster No. 4.	Gasous.	Fan.	13' x 8'	4	2 1/2	Garbal.	Steam.	.....	.....	28,000	25,000	28,000	181	158
	Webster No. 5.	Non-gas.	Fan.	12' x 8'	3 1/2	1 1/2	Garbal.	Electric.	.....	.....	13,000	13,000	13,000	78	163
	Webster No. 6.	Non-gas.	Fan.	12' x 8'	3 1/2	1 1/2	Garbal.	Electric.	.....	.....	12,000	12,000	12,000	73	164
	Webster No. 7.	Non-gas.	Fan.	12' x 8'	3 1/2	1 1/2	Garbal.	Electric.	.....	.....	12,000	12,000	12,000	73	164
	Webster No. 8.	Non-gas.	Fan.	12' x 8'	3 1/2	1 1/2	Garbal.	Electric.	.....	.....	12,000	12,000	12,000	73	164
	Webster No. 9.	Non-gas.	Fan.	12' x 8'	3 1/2	1 1/2	Garbal.	Electric.	.....	.....	12,000	12,000	12,000	73	164
Puritan Coal Company.	Puritan No. 1.	Non-gas.	Fan.	16' x 5'	1 1/2	1 1/2	Garbal.	Steam.	.....	.....	60,000	54,000	62,000	229	245
	Puritan No. 2.	Non-gas.	Fan.	12' x 4'	1 1/2	1 1/2	Garbal.	Steam.	.....	.....	18,000	17,000	18,000	114	149
	Puritan No. 3.	Non-gas.	Fan.	12' x 4'	1 1/2	1 1/2	Garbal.	Steam.	.....	.....	18,000	17,000	18,000	114	149
Rolling Mill Company.	Rolling Mill.	Gasous.	Fan.	16' x 4'	2	5	Capell.	Steam.	.....	.....	128,000	101,000	131,000	321	211
	Camrrough slope.	Gasous.	Fan.	12' x 4'	1 1/2	1 1/2	Garbal.	Steam.	.....	.....	30,000	29,800	30,000	117	256

TABLE 1—Continued.

Names of Operators and Mines.	Kind of opening.	Gaseous or non-gaseous.	Meth of ventilation.	Diameter and width of fan in feet.	Water gauge developed—in inches.	Name of fan.	Power used.	Area of furnace bars in square feet.	Number of air spills of air currents.	Number of cubic feet of air per minute entering the mine at inlet.	Total quantity of air per minute circulating in all the splits in cubic feet.	Number of cubic feet per minute passing out at outlet.	Number of persons employed inside.	Average number of cubic feet per minute provided for each person.
S. Hamilton Coal Co. Adams,	Drift,	Non-gas.	Fan,	12 x 4	.5	Guibal,	Steam, .....	.....	1	19,000	18,000	19,000	42	428
D. Laughman & J. Leahy. Bear Rock,	Drift,	Non-gas.	Furnace, ..	.....	.....	.....	.....	20	1	4,800	4,800	4,800	51	94
Bando Coal Co. Bando,	Drift,	Non-gas.	Furnace, ..	.....	.....	.....	.....	24	1	7,000	5,000	7,000	26	290
Bethel Coal Co. Bethel,	Drift,	Non-gas.	Furnace, ..	.....	.....	.....	.....	21	1	4,000	4,000	4,000	34	129
Munser Coal Co. Conemaugh,	Drift,	Non-gas.	Furnace, ..	.....	.....	.....	.....	26	1	10,200	10,200	10,200	25	408
D. Laughman. Dysert,	Drift,	Non-gas.	Fan,	7 x 1½	.3	Stine,	Steam, .....	.....	1	18,000	18,000	18,000	72	256
Ferndale Coal Co. Ferndale,	Drift,	Non-gas.	Furnace, ..	.....	.....	.....	.....	18	1	5,000	5,000	5,000	22	227
Whitney, Kemmer & Holes. Federal 1 and 2,	Drift,	Non-gas.	Furnace, ..	.....	.7	.....	.....	30	1	9,500	9,000	9,000	80	118
Polkzell Coal Co. Ivy Ridge,	Drift,	Non-gas.	Fan,	12 x 4	1	Guibal,	Electric, ..	.....	1	24,000	23,000	24,000	50	460
Larkin Steel Co. Ingle Side,	Drift,	Non-gas.	Furnace, ..	.....	.....	.....	.....	20	1	8,000	7,500	8,200	22	310
Somerset Mining Co. Lewis,	Drift,	Non-gas.	Fan,	12 x 4	.6	Guibal,	Steam, .....	.....	2	21,000	20,000	21,000	36	555

Lilly Coal Co.	Drift.....	Non-gas.	Fan.....	12 x 4	1 2	Guibal.....	Steam.....	2	18,600	18,000	18,000	139	129
Lilly Slope.....	Drift.....	Non-gas.	Furnace.....									23	103
Llewellyn & Yeagley.	Slope.....	Non-gas.	Fan.....	7 x 1½	.5	Stine.....	Steam.....	1	24,000	18,000	24,000	71	253
Moshannon Coal Co.	Shaft.....	Non-gas.	Fan.....	12 x 4	.4	Guibal.....	Steam.....	2	24,000	19,000	20,000	43	441
Moshannon No. 2.....	Drift.....	Non-gas.	Fan.....	15 x 4½	.5	Guibal.....	Steam.....	2	26,000	20,000	21,000	122	153
Murdoch Bros.	Slope.....	Non-gas.	Fan.....	12 x 4	1.3	Guibal.....	Steam.....	2	14,000	13,500	14,500	125	108
Reading Coal Iron Co.	Drift.....	Non-gas.	Furnace.....		.5			40	12,500	11,000	13,000	47	231
Kimmelton No. 1 and 2.....	Drift.....	Non-gas.	Furnace.....					24	8,000	6,000	8,000	38	210
Penn Bituminous Coal Co.	Slope.....	Non-gas.	Fan.....	16 x 6			Electric.....	2	29,000	20,000	30,000	201	139
Portage slope.....	Drift.....	Non-gas.	Fan.....	10 x 3½	.3	Guibal.....	Steam.....	1	1,300	11,000	13,000	46	229
Priscilla Coal Co.	Drift.....	Non-gas.	Fan.....	18 x 5	1.4	Guibal.....	Steam.....	5	67,000	62,000	68,000	275	225
Plain.....	Drift.....	Non-gas.	Fan.....	7 x 1½	1.1	Stine.....	Electric.....	3	28,000	27,000	29,000	256	105
Plymouth Coal Mining Co.	Slope.....	Non-gas.	Fan.....	16 x 5	2.2	Guibal.....	Steam.....	3	40,000	40,000	40,000	213	187
Plymouth No. 1.....	Drift.....	Non-gas.	Fan.....	12 x 4	1.4	Guibal.....	Steam.....	1	9,000	9,000	9,000	65	138
Quemahoning 1 and 2.....	Drift.....	Non-gas.	Furnace.....					15	7,500	7,000	7,400	26	270
Radnor.....	Drift.....	Non-gas.	Fan.....	12 x 4	.4	Guibal.....	Steam.....	1	9,000	9,000	9,000	50	180
Stineman Coal Mining Co.	Drift.....	Non-gas.	Fan.....	16 x 5	1.4	Guibal.....	Steam.....	4	52,000	51,000	53,000	177	288
Stineman No. 1.....	Drift.....	Non-gas.	Fan.....										
Stineman C. & C. Co.	Drift.....	Non-gas.	Fan.....										
Stineman No. 2.....	Drift.....	Non-gas.	Fan.....										
South Fork Coal Co.	Slope.....	Non-gas.	Fan.....										
South Fork.....	Drift.....	Non-gas.	Fan.....										
Standard Coal Co., Ltd.	Drift.....	Non-gas.	Fan.....										
Standard.....	Drift.....	Non-gas.	Fan.....										
Robinson & Irvin.	Drift.....	Non-gas.	Furnace.....										
St. Clair.....	Drift.....	Non-gas.	Fan.....										
Shamrock Coal Co.	Drift.....	Non-gas.	Fan.....										
Shamrock.....	Drift.....	Non-gas.	Fan.....										
Sennan Shaft Coal Co.	Shaft.....	Non-gas.	Fan.....										
Sennan shaft No. 2.....	Shaft.....	Non-gas.	Fan.....										

TABLE I—Continued.

Name of operators and Mines.	Kind of opening.	Gasous or non-gasous.	Method of ventilation.	Diameter and width of fan in feet.	Water gauge developed—inches.	Name of fan.	Power used.	Area of furnace bars in square feet.	Number of air splits of air currents.	Number of cubic feet of air per minute entering the mine at inlet.	Total quantity of air per minute circulating in all the splits in cubic feet.	Number of cubic feet per minute passing out at outlet.	Number of persons employed inside.	Average number of cubic feet per minute provided for each person.
Valley Coal Co.	Drift.....	Non-gas.	Furnace.....	.....	.....	.....	.....	24	1	6,000	6,000	6,000	40	150
Wells Creek Coal Co.	Drift.....	Non-gas.	Fan.....	10 x 3½	.4	Guibal.....	Steam.....	.....	2	24,000	22,000	26,000	80	275
T. S. Shoemaker & Co. Wilmington No. 1.	Drift.....	Non-gas.	Fan.....	16 x 5½	.2	Guibal.....	Steam.....	.....	2	40,000	40,000	40,000	87	459
George Pierce & Sons. Caldwell.	Drift.....	Non-gas.	Fan.....	12 x 4	.4	Guibal.....	Steam.....	.....	.....	22,000	22,000	22,000	70	314
Mountain Coal Co.	Drift.....	Non-gas.	Furnace.....	.....	.....	.....	.....	30	.....	*	.....	.....	.....	.....
Central Coal Co.	Drift.....	Non-gas.	Fan.....	16 x 5	1.2	Capell.....	Steam.....	.....	.....	8,000	8,000	8,000	30	263
W. J. Williams. Williams.	Drift.....	Non-gas.	Furnace.....	.....	.....	.....	.....	24	.....	5,000	5,000	5,000	16	312

*Have not examined mine yet.

J. Names of mines using coal cutting machines, names of machines, power used, geological and local names of seams, thickest and thinnest seams where machines are used, and the approximate number of tons produced by machines during 1902.

Names of Mines.	Kind of opening.	Gaseous or non-gaseous.	Name and Number of Machines in Use.						Total machines used.	Power used by machines.	Geological and local name of seam.	Average thickness in inches.			Height of seam in inches.		Approximate number of tons produced by machines.
			Ingersoll.	Sullivan.	Harrison.	Jeffrey.	Morgan-Gardiner.	Link Belt.				Thickest.	Thinnest.				
Eureka No. 30.	Drift...	Non-gas.	18	17	...	...	...	...	55	Compressed air.	B. or Miller.	44	54	36	542,678
Eureka No. 31.	Drift...	Non-gas.	18	17	...	...	...	...	55	Compressed air.	B. or Miller.	44	54	36	488,486
Eureka No. 32.	Drift...	Non-gas.	16	16	...	...	...	...	52	Compressed air.	B. or Miller.	44	54	36	314,324
Eureka No. 33.	Drift...	Non-gas.	14	13	...	...	...	...	32	Compressed air.	B. or Miller.	44	54	36	290,446
Eureka No. 34.	Drift...	Non-gas.	15	14	...	...	...	...	29	Compressed air.	B. or Miller.	44	54	36	387,550
Eureka No. 35.	Drift...	Non-gas.	19	19	...	...	...	...	29	Compressed air.	B. or Miller.	44	54	36	446,399
Eureka No. 36.	Drift...	Non-gas.	15	15	...	...	...	...	33	Compressed air.	B. or Miller.	44	54	36	311,292
Eureka No. 37.	Drift...	Non-gas.	15	15	...	...	...	...	30	Compressed air.	B. or Miller.	44	54	36	49,045
Eureka No. 38.	Drift...	Non-gas.	5	5	...	...	...	...	10	Compressed air.	B. or Miller.	44	54	36	14,137
Eureka No. 39.	Drift...	Non-gas.	5	5	...	...	...	...	10	Compressed air.	B. or Miller.	44	54	36	54,510
Webster No. 2.	Slope...	Non-gas.	1	1	...	...	...	...	8	Compressed air.	B. or Miller.	42	48	30	39,497
Webster No. 15.	Shaft...	Non-gas.	5	2	...	...	...	...	7	Compressed air.	B. or Miller.	42	48	30	106,336
Webster No. 6 and 8.	Drift...	Non-gas.	14	6	...	...	...	...	20	Compressed air.	D. or Moshamon.	46	48	42	6,000
Madison No. 7.	Drift...	Non-gas.	...	...	...	...	1	...	1	Electric.	E. or Lemon.	48	54	42	503,865
Madison Mill.	Drift...	Gaseous.	15	12	...	...	...	...	27	Compressed air.	E. or Cement.	48	58	42	39,378
Franklin Slope.	Slope...	Gaseous.	4	4	...	...	...	...	4	Compressed air.	B. or Miller.	42	60	24	5,104
Franklin No. 3.	Slope...	Non-gas.	2	2	...	...	...	...	2	Compressed air.	B. or Miller.	42	60	36	29,399
Leostan No. 3.	Slope...	Non-gas.	...	...	...	...	5	...	6	Electric.	C. or Cement.	36	42	36	22,662
Stewart.	Drift...	Non-gas.	...	...	6	...	...	...	6	Compressed air.	B. or Cement.	32	42	33	8,000
Adams.	Drift...	Non-gas.	4	4	...	...	...	...	2	Compressed air.	E. or Cement.	32	36	30	41,900
IXV Ridge.	Drift...	Non-gas.	...	...	...	...	1	1	2	Electric.	C. or Cement.	48	54	46	81,072
Hamilton Nos. 1 and 2.	Drift...	Non-gas.	...	...	16	...	...	...	15	Compressed air.	C. or Cement.	32	36	28	6,040
Quenabonking.	Slope...	Non-gas.	7	6	...	...	...	...	13	Compressed air.	C. or Cement.	68	72	48	4,001
Williams.	Drift...	Non-gas.	...	...	...	1	...	...	1	Electric.	B. or Miller.	42	46	30	4,204,040
Totals.			185	179	22	1	7	1	355								4,204,040

Remarks on Accidents.

The record of fatal accidents in this district for the past year has been favorable in so far as the ordinary causes are concerned, namely, falls of coal and rock by mine cars, and machinery; but, as usual, nearly half of them might have been avoided by ordinary care on the part of the victims themselves. A large percentage was caused by falls of rock, which exceeded those by falls of coal, which are usually foremost on the fatal list, while a very small proportion was due to mine cars.

On the whole, the reports of fatal accidents (excepting the Rolling Mill mine disaster) have been very satisfactory, considering the large quantity of coal mined, and the tendency of operators to hire any one who wanted work, regardless of whether he was a miner or not, the result of an urgent market for coal at good prices, together with a scarcity of labor.

Rolling Mill Mine Explosion.

This disaster occurred on the morning of July 10th, at about 11:30 o'clock, in the Klondyke district of the Cambria Steel Company's Rolling Mill mine, at Johnstown. I was away from home on duty and did not hear of the explosion until 5 o'clock in the evening, while I was waiting for a train at the depot in South Fork. I did not credit the report when it first reached me, as I thought it almost impossible for such a thing to occur in this mine, knowing its high reputation for ventilation and other essentials; so I went to a 'phone and called up the editor of our evening paper, who confirmed the report, adding that unfortunately nearly all the officials of the mine were also supposed to be lost. They were in the offices on the turnout, about one and one-half miles from the entrance, except four fire bosses, who were on a dilly trip ready to go out at the close of their turn. On hearing of the explosion, these latter, in company with the mine foreman, his assistant, the machine and labor bosses and an assistant fire boss, nine in all, had rushed down into the Klondyke, where they found several doors blown down. Some of them had commenced to make repairs here to aid in restoring ventilation, while others hastened to carry the news of the explosion to miners still at work and have them come out. In a short time the deadly after-damp reached the officials, causing the death of five and overcoming the balance, leaving none of them to assist in the work of rescue.

I arrived at Johnstown at 6 o'clock in the evening, and at once drove to Mill Creek, a distance of six miles, the site of the ventilating plant, where a sixteen-foot Capell fan forces air into the workings. I arrived at this opening about 7 o'clock, and found that the fan had

not been disturbed, but was forcing into the mine a continuous current of 135,000 to 145,000 cubic feet of air per minute. I was also informed that a rescuing party had gone down the shaft, composed of the mine officials who were not in the explosion, with volunteers, and accompanied by some of the leading physicians of the city.

I pause here to pay a deserved tribute to the Johnstown doctors, whose services were of incalculable value in this catastrophe, and whose courage was astonishing. They were in the lead with all the rescuing parties, and saved several lives by the use of oxygen and other preparations with which they were supplied for the occasion.

Having previously supplied myself with lamps from my office, on my arrival at Mill Creek I at once entered the shaft and overtook the rescuing parties before they had reached the vicinity of the explosion. Before any work was attempted we organized the men into gangs, and formed relays, so as to be in communication with each other all the time, and gave the members of the party to understand that everything must be done in a systematic manner and strict discipline was to be maintained. It was my desire to prevent if possible any further loss of life, and to assist all in my power in the rescue of those who might be still living, and the speedy recovery of the bodies, and I well knew that to succeed in the first mentioned object, under existing circumstances demanded the strictest sort of discipline, as the daring and bravery of miners when the lives of their fellows are at stake is never surpassed, if indeed equaled, by any other class of men living.

Thus the task was commenced. At a distance of nearly two miles from the entrance of the mine the brave band of rescuers commenced their work, and within forty hours twenty-one men had been taken out alive and 112 dead bodies had been recovered, without a single accident to any of the rescuing parties. Out of 112 persons who lost their lives in this explosion, the bodies of only seven showed marks of having been burned, the balance having been suffocated by the after-damp.

When the recovery of the bodies had been completed, little work was required to put the mine in condition for operation, except for the repairing of a few doors and some brattice work, as the destruction from the force of the detonation was almost incredibly small, attesting to its feebleness, but I doubt if there has ever occurred in any mine an explosion where the after-damp was so destructive as in this case. The fact that it was such a feeble explosion, with its location on a fall, where there was little or no air to mix with the gas, is sufficient support for the theory that, owing to the absence of the air necessary to perfect combustion, the after-damp was particularly heavy with the deadly carbonic oxide; possibly three or

four per cent. immediately following the explosion; but enough to kill men almost instantly. Only at one place in the mine was there evidence that the explosion had been violent. That was where the air, coming in from the overcast, struck the edge of the fall, and enough of it, probably, mingled with the gas to bring the latter, or at least a small body of it, to the most explosive point. But where it was ignited the mixture of air and gas was possibly as low as four or five parts of the former to one of the latter, the result being a mixture at the lowest point of ignition, but producing an after-damp of the most poisonous character. In proof of the weakness of the explosion at this point, it may be noted that a door not over 350 or 400 feet away was not torn off its hinges, and another beyond that point about 150 feet was not even blown open.

A fact which will appear remarkably strange, but is nevertheless true, is that the loss of life from this feeble explosion was fully fifty per cent. greater than would have been the case had it been more violent. This was the case for two reasons: First, because of the light detonation the men on the west side of the main heading did not know that an explosion had occurred, for if they had heard it, all on that side could have escaped. Second, if the explosion had been more violent, the after-damp would not have been so destructive to life also; it would have been much more easily diluted with enough air to make it life-supporting, as not less than 150,000 cubic feet of air was forced into this district each minute from the time of the explosion until the mine was cleared up again.

From the evidence produced at the inquest upon the bodies of the victims of this disaster, it was learned that all the men employed in the vicinity of the gas which exploded had been not only continually cautioned as to the presence of gas on the falls, but were picked men selected on account of their knowledge of safety lamps and the method of using them to examine for gas, for which they were ordered to look always before firing shots. But in spite of all these precautions and care, a great catastrophe occurred through lack of care on the one part and on the other through too much liberty, or rather through the abuse of liberty which it is now known it was unwise to give, because those who received, abused it. This liberty permitted men who worked in the vicinity of the gas, to take their naked lights into the danger marks made by the fire bosses. There was no danger in this of itself, and it gave the men better light for traveling to their work, but it also afforded an opportunity for a man who was reckless enough to lay aside his safety, and use his naked lamp for the sake of getting a better light.

But even such a catastrophe as this was not warning enough in some quarters as it seemed, for in less than six weeks after it occurred we were compelled to prosecute a man for lighting a ciga-

rette right in the heart of a gaseous district of the mine, where nothing but locked safety lamps were permitted to be used. This act so enraged the miners who appreciated the possible result that I very much fear he would have received bodily harm had he not been quietly taken out of the mine and afterwards to jail. As it was, his act was followed by consequences serious enough, for it brought upon good and careful men a dread that, however great the care they themselves took, disaster and death might be brought upon them at any moment by some such reckless person igniting a body of gas through opening a lamp, or by smoking, or some other careless act, criminal under such circumstances.

In my official position I am no doubt expected to make some suggestions which may aid in the prevention of such catastrophes in the future, but I despair of offering anything that would avail under the circumstances. What can we do when among a hundred or more miners there is one who disregards the safety of himself and others, and recklessly violates all laws and rules in the gloomy caverns of the mine, where detection is no easy matter? Clearly, but one thing, invoke the law's extreme penalty upon any such when discovered, provided they have not already caused an explosion or other disaster and have fallen a victim to their own carelessness. As to the particular situation in the Cambria Rolling Mill Mine, the only suggestion I have to offer was made at the time of the investigation of the catastrophe of July 10th, which was to permit no one in the gaseous district to use any except a locked safety lamp, or some other light that would not ignite gas if suddenly come upon. It is understood, of course, that no standing gas is allowed in any part of the mine where it is practicable to remove it. One of the places where its removal is very often impracticable is on a large fall. But men are not expected to work on falls; and when engaged around the edges, if some sudden force pushes the gas down upon them, they have for their protection the safety lamp.

Until a safety lamp is put upon the market which will give something near as good illumination as the ordinary naked light, the men will continue their aversion to the common safety lamp, notwithstanding its almost absolute protection in a gaseous mine, if it is properly used and cared for, and the rules and mining laws are strictly complied with. There is no denying that the type of safety lamp in ordinary use is very unpopular with the miner of to-day, and all too frequently, in order to get a better light than it affords, he throws care and caution to the winds and endangers himself and others.

The following letter explains itself:

Johnstown, Pa., July 23, 1902.

Mr. George T. Robinson, Superintendent,
Rolling Mill Mine, Cambria Steel Co.:

Dear Sir: We made a careful and searching investigation of that portion of your Rolling Mill mine known as the Klondyke district, in which an explosion of fire-damp occurred on the 10th inst., and found miners open lamps in that part of the mine in which we were informed that safety lamps were required to be used, and were in use at that time. These lamps contained cotton and oil ready for use, and were in such places that would warrant the opinion that they were in use at the time the explosion occurred. And we further find that shots had been fired in close proximity to the rib fall on No. 5 entry where the gas was accumulated which caused said explosion, also at the face of No. 2 room off No. 6 entry right, which is connected by an opening to the fall where explosive gas had been known to your mine officials to exist since the first break or rib falls were made on said No. 5 entry. We also found smokers articles in No. 4 long wall room where safety lamps were being used. The smokers articles were in the pockets of clothing lying on the floor. This you will find by reference to Article 5, Sections 3 and 5 and Rule 15 of the Act of May 15, 1893, to be a violation of the said Act; therefore we recommend that for the future safety of your mine and the persons employed therein, you require your mine foreman and other mine officials to use their utmost endeavor to carry out the provisions of the said Act.

Very respectfully yours,

J. T. EVANS,
Inspector 6th Bit. District.
C. B. ROSS,
Inspector 2d Bit. District.
I. G. ROBY,
Inspector 5th Bit. District.
JOSEPH WILLIAMS,
Inspector 10th Bit. District.

Condition of Mines.

Improvement has been the order of the year in the district. Betterments in haulage, drainage and ventilation of the mines have tended to greater safety and a gain in sanitary condition. Quite a number of mines along the main line of the Pennsylvania Railroad,

between Johnstown and Cresson, which are among the oldest in the district, have been improved at very great expense, with a view to increasing the output of coal. But some operators have erred in neglecting to increase the air supply and make it adequate for the larger number of men necessary to produce the greater tonnage. It should require no argument to prove that as a mine is extended, more power is needed to force sufficient air into it, but this very plain fact seems to have been disregarded under the conditions that have prevailed during the past year or so. There has been a great boom in the coal trade, and a corresponding effort has been made to meet the augmented demand by increasing the capacity of mines, and in some cases doubling it. When this is done, if the haulage is by mule power, twice as many mules are put in, and if by machinery, its capacity is increased accordingly. But the minds of the operators do not appear to grasp the idea that there should be any increase in the ventilating power. They apparently expect it to meet the new demands unassisted, and to properly ventilate workings vastly increased, perhaps twice as large as those which previously taxed its capacity. Of course it need not be said that this policy is the exact opposite of that which should prevail. When an increase in the capacity of a mine is contemplated, the very first step should be to increase the ventilation, the life, as it were, of everything which must operate to produce a greater output. Even the machinery will not yield best results if the men who manage it are not furnished that which enables them to perform their work properly and energetically—namely, pure air and plenty of it. It is true that movements are now on foot in some of the mines mentioned to improve the ventilation, but, as intimated, all other improvements were looked after first.

Mechanical haulage is practically universal in the large mines, but mechanical mining is not much of a success along the Allegheny mountains, as the seam of coal in this district is not well adapted to machines, the Miller, or B seam, in particular, on account of the undulating bottom. The Lemon and C prime are well suited for either Puncher or Chain machines.

The other parts of the district, on the South Fork branches, are all practically new mines, which are well equipped with the most modern appliances. These include the Berwind-White Coal Mining Company's mines at Windber and their shaft at Dunlo, all machine mines except the latter, which produced during the year 3,307,678 tons of coal. The remainder of the mines in the district are located at Johnstown, and along the Somerset and Cambria Branch of the Baltimore and Ohio Railroad, up to Rockwood. All are in very satisfactory condition as regards ventilation, drainage, etc., except a few of the newer and smaller ones, where ventilating plants are now being installed.

TABLE I—Showing names of operators, railroads, etc., and location of collieries in the Sixth Bituminous District for the year 1902.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Berwind-White C. M. Co.						
Eureka No. 3.	Somerset	Thomas Fisher.	Philadelphia.	Chas. A. Sharpless.	Windber.	Pennsylvania Railroad.
Eureka No. 31.	Somerset	Thomas Fisher.	Philadelphia.	Chas. A. Sharpless.	Windber.	Pennsylvania Railroad.
Eureka No. 32.	Somerset	Thomas Fisher.	Philadelphia.	Chas. A. Sharpless.	Windber.	Pennsylvania Railroad.
Eureka No. 33.	Somerset	Thomas Fisher.	Philadelphia.	Chas. A. Sharpless.	Windber.	Pennsylvania Railroad.
Eureka No. 34.	Somerset	Thomas Fisher.	Philadelphia.	Chas. A. Sharpless.	Windber.	Pennsylvania Railroad.
Eureka No. 35.	Somerset	Thomas Fisher.	Philadelphia.	Chas. A. Sharpless.	Windber.	Pennsylvania Railroad.
Eureka No. 36.	Somerset	Thomas Fisher.	Philadelphia.	Chas. A. Sharpless.	Windber.	Pennsylvania Railroad.
Eureka No. 37.	Somerset	Thomas Fisher.	Philadelphia.	Chas. A. Sharpless.	Windber.	Pennsylvania Railroad.
Eureka No. 38.	Somerset	Thomas Fisher.	Philadelphia.	Chas. A. Sharpless.	Windber.	Pennsylvania Railroad.
Eureka No. 39.	Somerset	Thomas Fisher.	Philadelphia.	Chas. A. Sharpless.	Windber.	Pennsylvania Railroad.
Eureka No. 40.	Somerset	Thomas Fisher.	Philadelphia.	Chas. A. Sharpless.	Windber.	Pennsylvania Railroad.
Yellow Run shaft.	Cambria.	A. J. Cook.	Philadelphia.	Thos. Griffith.	Windber.	Pennsylvania Railroad.
Webster Coal Co.						
Webster No. 1.	Cambria.	E. T. Conner.	Cresson.	R. D. Mainwaring.	Cresson.	Pennsylvania Railroad.
Webster No. 2.	Cambria.	E. T. Conner.	Cresson.	R. D. Mainwaring.	Cresson.	Pennsylvania Railroad.
Webster No. 3.	Cambria.	E. T. Conner.	Cresson.	W. H. Keller.	Ehrenfield.	Pennsylvania Railroad.
Webster No. 4.	Cambria.	E. T. Conner.	Cresson.	W. H. Keller.	Ehrenfield.	Pennsylvania Railroad.
Webster No. 5.	Cambria.	E. T. Conner.	Cresson.	W. H. Keller.	Ehrenfield.	Pennsylvania Railroad.
Webster No. 6.	Cambria.	E. T. Conner.	Cresson.	W. H. Keller.	Ehrenfield.	Pennsylvania Railroad.
Webster No. 7.	Cambria.	E. T. Conner.	Cresson.	W. H. Keller.	Ehrenfield.	Pennsylvania Railroad.
Webster No. 8.	Cambria.	E. T. Conner.	Cresson.	W. H. Keller.	Ehrenfield.	Pennsylvania Railroad.
Webster No. 9.	Cambria.	E. T. Conner.	Cresson.	W. H. Keller.	Ehrenfield.	Pennsylvania Railroad.
Webster No. 10.	Cambria.	E. T. Conner.	Cresson.	W. H. Keller.	Ehrenfield.	Pennsylvania Railroad.
Webster No. 11.	Cambria.	E. T. Conner.	Cresson.	W. H. Keller.	Ehrenfield.	Pennsylvania Railroad.
Webster No. 12.	Cambria.	E. T. Conner.	Cresson.	W. H. Keller.	Ehrenfield.	Pennsylvania Railroad.
Webster No. 13.	Cambria.	E. T. Conner.	Cresson.	W. H. Keller.	Ehrenfield.	Pennsylvania Railroad.
Webster No. 14.	Cambria.	E. T. Conner.	Cresson.	W. H. Keller.	Ehrenfield.	Pennsylvania Railroad.
Webster No. 15.	Cambria.	E. T. Conner.	Cresson.	W. H. Keller.	Ehrenfield.	Pennsylvania Railroad.
Purtan Coal Co.						
Purtan No. 1.	Cambria.	George E. Scott.	Philadelphia.	P. F. Campbell.	Purtan.	Pennsylvania Railroad.
Purtan No. 2.	Cambria.	George E. Scott.	Philadelphia.	P. F. Campbell.	Purtan.	Pennsylvania Railroad.
Cambria Steel Co.						
Rolling Mill.	Cambria.	M. G. Moore.	Johnstown.	Geo. T. Robinson.	Johnstown.	Coal all used in steel works of company.
Cummaugh slope.	Cambria.	M. G. Moore.	Johnstown.	Geo. T. Robinson.	Johnstown.	do.
Franklin slope.	Cambria.	M. G. Moore.	Johnstown.	Geo. T. Robinson.	Johnstown.	do.
Franklin No. 1.	Cambria.	M. G. Moore.	Johnstown.	Geo. T. Robinson.	Johnstown.	do.
Franklin No. 2.	Cambria.	M. G. Moore.	Johnstown.	Geo. T. Robinson.	Johnstown.	do.
W. H. Piper & Co.						
Sunman No. 1.	Cambria.	A. H. Slayman.	Altoona.	Geo. S. Forsythe.	Lilly.	Pennsylvania Railroad.
Sunman No. 2.	Cambria.	A. H. Slayman.	Altoona.	Geo. S. Forsythe.	Lilly.	Pennsylvania Railroad.
Sunman No. 3.	Cambria.	A. H. Slayman.	Altoona.	Geo. S. Forsythe.	Lilly.	Pennsylvania Railroad.
Sunman No. 4.	Cambria.	A. H. Slayman.	Altoona.	Geo. S. Forsythe.	Lilly.	Pennsylvania Railroad.

Coulter & Huff.	Cambria,.....	J. P. Wilson,.....	South Fork,.....	J. W. Wilson,.....	South Fork,.....	Pennsylvania Railroad.
Argyle	Cambria,.....	J. P. Wilson,.....	South Fork,.....	J. W. Wilson,.....	South Fork,.....	Pennsylvania Railroad.
Cenemaugh	Cambria,.....	J. P. Wilson,.....	South Fork,.....	J. W. Wilson,.....	South Fork,.....	Pennsylvania Railroad.
Kokoma,	Cambria,.....	James B. Thomas,.....	Johnstown,.....	Wm. Oppy,.....	Johnstown,.....	All used at brick works of company.
A. J. Haws & Son, Ltd.	Cambria,.....	James B. Thomas,.....	Johnstown,.....	Wm. Oppy,.....	Johnstown,.....	
Coopersdale,	Cambria,.....	C. C. Watt,.....	Philadelphia,.....	Joseph Paterson,.....	Onnallinda,.....	Pennsylvania Railroad.
Loyalhanna Coal & Coke Co.	Cambria,.....	C. C. Watt,.....	Philadelphia,.....	Joseph Paterson,.....	Onnallinda,.....	Pennsylvania Railroad.
Somman shaft No. 1,	Cambria,.....					
Loyalhanna No. 3,	Cambria,.....					
Henrietta Coal Co.	Cambria,.....					
Henrietta shaft No. 1,	Cambria,.....			J. S. Campbell,.....	Dunlo,.....	Pennsylvania Railroad.
Henrietta shaft No. 2,	Cambria,.....			J. S. Campbell,.....	Dunlo,.....	Pennsylvania Railroad.
Henrietta shaft No. 3,	Cambria,.....					
A. F. Clark & Co.	Somerset,.....	Uriah Jones,.....	Hooversville,.....	Uriah Jones,.....	Hooversville,.....	Baltimore and Ohio Railroad.
Stony Creek,	Somerset,.....	Uriah Jones,.....	Hooversville,.....			
Maderia Coal Co.	Cambria,.....	W. J. Betts,.....	Clearfield,.....	Thos. Langford,.....	Portage,.....	Pennsylvania Railroad.
Maderia No. 1,	Cambria,.....	W. J. Betts,.....	Clearfield,.....	Wm. Towle,.....	Portage,.....	
Maderia No. 2,	Cambria,.....					
Maderia No. 3,	Cambria,.....					
Logan Coal Co.	Cambria,.....	J. A. Boucher,.....	Dunlo,.....	J. A. Boucher,.....	Dunlo,.....	Pennsylvania Railroad.
Logan,	Cambria,.....	J. A. Boucher,.....	Dunlo,.....	J. A. Boucher,.....	Dunlo,.....	Pennsylvania Railroad.
Wagner,						
Somerset Coal Co.	Somerset,.....	J. C. Borydon,.....	Somerset,.....	F. F. Lyon,.....	Somerset,.....	Baltimore and Ohio Railroad.
Listie,	Somerset,.....	J. C. Borydon,.....	Somerset,.....	F. F. Lyon,.....	Somerset,.....	Baltimore and Ohio Railroad.
Stewart,	Somerset,.....	J. C. Borydon,.....	Somerset,.....	F. F. Lyon,.....	Somerset,.....	Baltimore and Ohio Railroad.
Wilson Creek,	Somerset,.....	J. C. Borydon,.....	Somerset,.....			
Cambria Coal M. Co.	Cambria,.....			Jos. J. McCann,.....	Loydell,.....	Pennsylvania Railroad.
Anchor,	Cambria,.....			Andy Barno,.....	Puritan,.....	Pennsylvania Railroad.
Lloydell,	Cambria,.....					
C. A. Buch,	Cambria,.....	C. A. Buch,.....	Philadelphia,.....	D. J. Mulliken,.....	Lloydell,.....	Pennsylvania Railroad.
Alton,						
S. Hamilton Coal Co.	Somerset,.....	Wm. A. Somerville,.....	Frostburgh, Md.,.....	P. M. Connor,.....	Listie,.....	Baltimore and Ohio Railroad.
D. Laughman & J. Leahy.	Cambria,.....	John Leahy,.....	Lilly,.....	John Leahy,.....	Lilly,.....	Pennsylvania Railroad.
Bear Hook,						
Bando Coal Co.	Somerset,.....	Thos. M. Richter,.....	Mt. Carmel,.....	Geo. Gehres,.....	Milford Station,.....	Baltimore and Ohio Railroad.
Bando,						
Rebhel Coal Co.	Somerset,.....			A. G. White,.....	Hallsopple,.....	Baltimore and Ohio Railroad.
Rebhel,						

TABLE I—Continued

Names of Operators and Col- lieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superin- tendent.	P. O. Address.	Railroad to Mine.
Murser Coal Co. Conemauch Nos. 2.	Cambria.	H. Hahman.	Altoona.	John Cooper.	Puritan.	Pennsylvania Railroad.
D. Laughman. Dysert.	Cambria.	D. Laughman.	Altoona.	Thos. Leahy.	Lilly.	Pennsylvania Railroad.
Ferdale Coal Co. Ferdale.	Cambria.			Geo. K. Shryock.	Johnstown.	Baltimore and Ohio Railroad.
Whitney, Kemmer & Hoffs. Federal Nos. 1 and 2.	Somerset.	E. W. Holl.	Hooversville.	D. T. Edwards.	Hooversville.	Baltimore and Ohio Railroad.
Ivy Ridge. Baltzell Coal Co.	Cambria.	Chas. Baltzell.	Altoona.	Joseph Higgins.	Portage.	Pennsylvania Railroad.
Lorain Steel Co. Ingleside.	Somerset.	P. Lavelle.	Johnstown.	Wm. T. Moss.	Walsell.	Baltimore and Ohio Railroad.
Somerset Mining Co. Lewis.	Somerset.			Telford Lewis.	Hooversville.	Baltimore and Ohio Railroad.
Lilly Coal Co. Lilly slope.	Cambria.	Chas. A. Hughes.	Altoona.	Nichols Evans.	Lilly.	Pennsylvania Railroad.
Llewellyn & Yeaghy. Llewellyn.	Cambria.	D. J. Llewellyn.	Johnstown.	D. J. Llewellyn.	Johnstown.	P. & O. and P. R. R.
Moshannon Coal Co. Moshannon Nos. 2.	Cambria.	Thos. Leahy.	Lilly.	Thos. Leahy.	Lilly.	Pennsylvania Railroad.
Murphy Bros. Milford shaft.	Somerset.	J. M. Murdoch.	Johnstown.	A. W. Lowther.	Milford Station.	Baltimore and Ohio Railroad.
Pending Coal & Iron Co. Kimmitt Nos. 1 and 2.	Somerset.	G. O. Schuchman.	Reading.	W. H. Druce.	Kimmitt.	Baltimore and Ohio Railroad.
Penn'a Bit Coal Co. Portage slope.	Cambria.	Ed. H. Houpt.	Philadelphia.	Irwin Croyl.	Portage.	Pennsylvania Railroad.
Prussella Coal Co. Prussella.	Cambria.	D. W. Lake.	South Fork.	J. H. Lake.	South Fork.	Pennsylvania Railroad.

J. W. Mentzer.	Cambria.....	J. W. Mentzer.	Holidaysburg, ..	John Leap,	Lilly,	Pennsylvania Railroad.
Plain,	Cambria.....	C. H. Rowland, ..	Tyrone,	T. S. Adams,	Puritan,	Pennsylvania Railroad.
Plymouth Coal Mining Co.	Somerset.....	W. H. Morris,	Boswell,	T. D. Morgan,	Boswell,	Baltimore and Ohio Railroad.
Merchant Coal Co.	Cambria.....	R. K. Styer,	Mineral Point, ..	R. K. Styer,	Mineral Point, ..	Pennsylvania Railroad.
Quemahoning Nos. 1 and 2, ..	Cambria.....	W. F. Stineman, ..	South Fork,	Thos. D. Williams, ..	South Fork,	Pennsylvania Railroad.
Radnor,	Cambria.....	H. Halman,	Altoona,	John Cooper,	Puritan,	Pennsylvania Railroad.
Stineman Coal M. Co.	Cambria.....	Jas. Callaghan,	South Fork, ... {	Jas. Callaghan,	South Fork, ... {	Pennsylvania Railroad.
Stineman No. 1.	Cambria.....	R. J. Hughes,	Altoona,	Nicholas Evans,	Lilly,	Pennsylvania Railroad.
Stineman No. 2.	Cambria.....	— Robertson,	Johnstown,	John Thomas,	Johnstown,	Pennsylvania Railroad.
South Fork Coal Co.	Somerset.....	T. H. Darby,	Rockwood,	F. H. Darby,	Rockwood,	Baltimore and Ohio Railroad.
Standard Coal Co., Ltd.	Cambria.....	.....	.....	C. W. Saxman,	Saxman,	Pennsylvania Railroad.
Standard.	Cambria.....	J. E. Ashley,	Johnstown,	J. E. Ashley,	Johnstown,	Baltimore and Ohio Railroad.
Robinson & Irvin.	Cambria.....	F. C. Kelchley,	Uniontown,	J. H. Lane,	Listie,	Baltimore and Ohio Railroad.
St. Clair,	Cambria.....	T. S. Shoemaker, ..	Philadelphia, ...	Edw. Dawson,	Saxman,	Pennsylvania Railroad.
Shamrock Coal Co.	Cambria.....	Robert Pierce,	Puritan,	Robert Pierce,	Puritan,	Pennsylvania Railroad.
Shamrock.	Cambria.....	J. P. Wilson,	South Fork,	R. Pardoe,	Dunlo,	Pennsylvania Railroad.
Saxman Shaft Coal Co.	Cambria.....	A. M. Custer,	Johnstown,	George B. Jones,	Johnstown,	Local use.
Saxman shaft No. 2.	Cambria.....	W. J. Williams, .....	.....	W. J. Williams,	Johnstown,	Local use.
Valley Coal Co.	Cambria.....	.....	.....	.....	.....	.....
Wells Creek Coal Co.	Cambria.....	.....	.....	.....	.....	.....
Wells Creek.	Cambria.....	.....	.....	.....	.....	.....
Wills.	Cambria.....	.....	.....	.....	.....	.....
Willmore No. 1.	Cambria.....	.....	.....	.....	.....	.....
George Pierce & Sons.	Cambria.....	.....	.....	.....	.....	.....
Carlwell.	Cambria.....	.....	.....	.....	.....	.....
Mountain Coal Co.	Cambria.....	.....	.....	.....	.....	.....
Dunlo drift.	Cambria.....	.....	.....	.....	.....	.....
Central Coal Co.	Cambria.....	.....	.....	.....	.....	.....
W. J. Williams.	Cambria.....	.....	.....	.....	.....	.....
Williams.	Cambria.....	.....	.....	.....	.....	.....

TABLE II.—Gives the total number of tons of coal mined and tons of coke produced in each colliery, number of days worked, number of employees, number of employees killed and injured, number of kegs of powder, etc., used in the Sixth Bituminous District for the year ending December 31 1902.

Names of Operators and Collieries.																
County.																
Barwind-White Coal Mining Co.																
Operator No.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees, tons.	Total production of coal in tons.	Total production of coke in tons.	Number of coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.			
Duracka No. 31.	528,874	12,794	10	512,678	.....	.....	260	279	2	2	2,139	3,450	.....		
Duracka No. 32.	480,489	7,284	.....	488,386	.....	.....	270	345	1	1	1,980	4,820	.....		
Duracka No. 33.	274,570	11,889	11	311,264	.....	.....	270	467	1	1	1,255	3,150	.....		
Duracka No. 34.	274,570	8,662	8	287,550	.....	.....	266	339	1	1	1,180	2,750	.....		
Duracka No. 35.	378,745	12,645	2,340	406,490	.....	.....	277	422	1	6	1,575	4,100	.....		
Duracka No. 36.	431,945	12,645	.....	446,690	.....	.....	262	403	1	.....	1,825	3,400	.....		
Duracka No. 37.	393,892	7,165	.....	311,292	.....	.....	276	436	.....	.....	1,995	3,400	.....		
Duracka No. 38.	283,708	7,284	.....	291,262	.....	.....	285	342	3	.....	1,255	2,750	.....		
Duracka No. 39.	45,400	3,306	50	45,605	.....	.....	294	152	.....	.....	1,750	1,600	.....		
Duracka No. 40.	11,137	.....	.....	11,137	.....	.....	296	71	.....	.....	528	1,650	.....		
Yellow Run shaft.	474,695	5,361	962	481,218	.....	.....	266	246	.....	.....	800	1,000	40
Totals.	3,219,264	81,366	2,491	3,307,678	.....	.....	274.7	4,180	14	12	14,133	33,100	40	
Webster Coal Co.																
Webster No. 1.	47,296	.....	171	47,467	.....	.....	167	97	.....	1	136	12	16
Webster No. 2.	31,325	2,972	13	34,910	.....	.....	262	117	.....	.....	145	300	9
Webster No. 3.	388,673	14,510	789	401,272	.....	.....	269	236	.....	332	1,360	2,530	27
Webster No. 4.	.....	.....	.....	.....	.....	.....	212	72	.....	.....	.....	.....	1
Webster No. 5.	37,241	2,081	96	39,447	.....	.....	241	85	.....	.....	292	1,622	13
Totals.	725,768	19,206	1,072	746,146	.....	.....	211.2	588	.....	3	2,133	4,538	79

*Tons in this column are averages.

Puritan No. 1,	Cambria,	165,365	4,599	119,807	247	219	529	11
Puritan No. 2,	Cambria,	70,641	650	540	332	126	215	6
Puritan No. 3,	Cambria,	256,007	5,150	340	236	366	755	29
Totals,								
Henrietta Coal Co.								
Henrietta shaft No. 1,	Cambria,	143,480	2,900	894	298	196	1,500	55
Henrietta shaft No. 2,	Cambria,	9,312	289	10	98	78	260	6
Totals,								
A. F. Clark & Co.								
Stoneycreek,	Somersel,	152,742	3,189	904	198	274	800	61
Totals,								
Madeira Coal Co.								
Madeira No. 1,	Cambria,	24,165	759	10	152	67	85	100
Madeira Nos. 3 and 2,	Cambria,	29,223	100	10	135	56	95	5
Totals,								
Logan Coal Co.								
Logan,	Cambria,	31,988	168	100	108	72	155	6
Wagner,	Cambria,	11,767	69	100	25	36	100	2
Totals,								
Logan Coal Co.								
Logan,	Cambria,	43,755	228	100	147	108	255	8
Totals,								
Somersel Coal Co.								
Listie,	Somersel,	96,166	640	680	278	157	300	1,350
Stewart,	Somersel,	6,300	50	680	102	69	50	250
Wilson Creek,	Somersel,	102,409	450	680	190.5	227	300	1,600
Totals,								
Cambria Coal Mining Co.								
Anchor,	Cambria,	179,732	820	298	180	263	1,380	400
Lloyd,	Cambria,	59,077	2,830	90	178	102	2	400
Totals,								
Cambria Steel Co.								
Rolling Mill,	Cambria,	69,250	1,37	112	20.2	99	1,100	13
Conemaugh slope,	Cambria,	27,168	3,826	447	180.6	424	3	400
Franklin slope,	Cambria,	25,600	1,600	1,600	201	53	400	7
Franklin No. 1,	Cambria,	56,157	1,735	200	297	88	745	300
Franklin No. 2,	Cambria,	88,157	1,735	1,600	284	111	1,145	300
Totals,								
Rolling Mill,	Cambria,	571,690	15,213	1,2	306	588	13,251	85
Conemaugh slope,	Cambria,	117,555	2,306	1,2	320	147	1,105	333
Franklin slope,	Cambria,	77,571	3,507	1,600	206	147	706	1,306
Franklin No. 1,	Cambria,	165,293	3,507	1,600	244	135	717	3,350
Franklin No. 2,	Cambria,	873,202	21,316	193	276.7	974	13,869	8,181
Totals,								

1. The first part of the document discusses the importance of maintaining accurate records of all transactions, both incoming and outgoing, to ensure transparency and accountability. It emphasizes the need for regular audits and the use of standardized accounting practices.

2. The second part outlines the various methods used to collect and analyze financial data, including direct observation, interviews, and the use of statistical models. It highlights the challenges associated with data collection in different contexts and provides recommendations for improving the quality of the information gathered.

3. The third section focuses on the interpretation of results and the drawing of conclusions from the collected data. It discusses the limitations of the study and offers suggestions for future research to address the identified gaps in knowledge.

4. Finally, the document concludes by summarizing the key findings and their implications for policy-making and practice. It stresses the importance of ongoing monitoring and evaluation to ensure that interventions remain effective and relevant over time.

TABLE II—Continued.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employes—tons.	Total production of coal in tons.	Total production of coke in tons.	Number of coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
W. H. Piper & Co.	Cambria	34,500	1,300	1,000	36,600			294	50			48		6
	Cambria	149,400	1,600	1,500	152,500			234	208	1	1	140	1,300	26
	Cambria	35,000			35,000			220	46			43		4
	Cambria							222.3	364	1	1	231	1,500	36
	Totals.	218,900	2,900	2,500	224,100									
Coulter & Huff.	Cambria	297,799	1,643	511	294,883			313	250		1	2,132	850	17
	Cambria	37,349	601	118	38,208			294	41			364	150	6
	Cambria	9,871			9,871			168	25			94		3
	Cambria							258.3	316		1	2,590	1,000	22
	Totals.	245,149	2,244	629	278,022									
A. J. Haws & Son, Ltd.	Cambria		1,410		36,213			308	52			250	1,250	8
	Cambria		600		9,801			298	18			75	1,215	2
	Cambria							363	67			306	2,463	10
	Cambria													
	Totals.		2,010		46,014									
Loyalhanna Coal and Coke Co.	Cambria	127,392	4,350	250	132,021			211	184	2		1,000		19
	Cambria	166,785	292	284	167,361			236	150		1	800		14
	Cambria													
	Cambria													
	Totals.	294,177	4,641	534	299,382			223.5	334	2	1	1,800		33

*Tons in this column are averages.

†44,000 tons used in fire brick works.

Production and other data for single collieries will be found in the recapitulation.

TABLE II—Continued.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Total production of coke in tons.	Number of coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
T. S. Shoemaker & Co.,	Cambria	67,222	146	.....	67,222	.....	.....	210	97	1	.....	5.0	180	.....
George J. Jones,	Cambria	50,993	50	.....	50,993	.....	.....	226	80	.....	.....	400	280	.....
General Coal Co.,	Cambria	1,324	.....	5,060	6,384	.....	.....	49	23	.....	.....	140	103	.....
Mammoth Coal Co.,	Cambria	50	50	14,000	14,050	.....	.....	10	23	.....	.....	140	.....	.....
W. J. Williams,	Cambria	.....	50	.....	.....	.....	.....	250	18	.....	.....	.....	.....	.....
Totals,		\$, 192,880	178,519	39,462	\$, 410,861	300	37	294.4	12,111	134	30	55,509	68,656	171
					\$8,411,311									

*Totals in this column are averages.

†Used in production of coke.

TABLE 11—Continued.

Names of Operators and Collieries.	County.	Number of Boilers.			Horse power.	Tubular.	Horse power.	Locomotives.			Number steam engines of all classes.	Total horse power.	Number pumps delivering water to surface.	Capacity in gallons per minute.	Quantity delivered to surface per minute—gallons.	Number electric dynamos.	Number air compressors.
		Number of Boilers.						Steam.	Air.	Electric.							
		Cylindrical.	Horse power.														
Berwind-White Coal Mining Co.,	Cam. & Som.	26	6,500	5	370	6,870	47	32	6,838	36	5,150	2,290	21	17	21		
Webster Coal Co.,	Cambria.	8	660	21	2,635	2,635	7	19	1,434	4	8,220	4,360	5	5	10		
Puritan Coal Co.,	Cambria.	7	1,440	8	660	660	4	5	775	2	360	600	3	3	5		
Camden Steel Co.,	Cambria.	3	600	7	500	1,940	1	9	1,540	4	600	400	3	3	2		
W. H. Piper & Co.,	Cambria.	1	15	4	325	370	1	1	340	1	600	400	2	2	2		
Coulter & Huff,	Cambria.	1	15	4	325	370	1	1	340	1	600	400	2	2	2		
A. J. Haws & Sons, Ltd.,	Cambria.	1	15	4	325	370	1	1	340	1	600	400	2	2	2		
Loyalhanna Coal and Coke Co.,	Cambria.	1	15	4	325	370	1	1	340	1	600	400	2	2	2		
Henrietta Coal Co.,	Cambria.	1	15	4	325	370	1	1	340	1	600	400	2	2	2		
A. F. Clark & Co.,	Somerset.	3	225	1	40	1,175	1	1	25	1	975	600	1	1	1		
Maderia Coal Co.,	Cambria.	3	225	1	40	1,175	1	1	25	1	975	600	1	1	1		
Logan Coal Co.,	Cambria.	3	225	1	40	1,175	1	1	25	1	975	600	1	1	1		
Somerset Coal Co.,	Cambria.	3	225	1	40	1,175	1	1	25	1	975	600	1	1	1		
Cambria Coal Mining Co.,	Cambria.	2	160	1	80	160	3	6	244	1	150	120	1	1	1		
A. Bach,	Somerset.	2	160	1	80	160	3	6	244	1	150	120	1	1	1		
D. Laughman,	Cambria.	1	80	1	80	80	1	1	80	1	200	100	1	1	1		
S. E. Ballou Coal Co.,	Somerset.	1	80	1	80	80	1	1	80	1	200	100	1	1	1		
D. Laughman & J. Leahy,	Cambria.	1	80	1	80	80	1	1	80	1	200	100	1	1	1		
Bando Coal Co.,	Somerset.	1	80	1	80	80	1	1	80	1	200	100	1	1	1		
Bethel Coal Co.,	Somerset.	1	80	1	80	80	1	1	80	1	200	100	1	1	1		
Munroe Coal Co.,	Cambria.	1	25	1	25	50	1	2	30	1	240	100	1	1	1		
D. Laughman,	Cambria.	1	25	1	25	50	1	2	30	1	240	100	1	1	1		
Ferndale Coal Co.,	Cambria.	1	25	1	25	50	1	2	30	1	240	100	1	1	1		
Whitney, Kemmer & Hollis,	Somerset.	1	25	1	25	50	1	2	30	1	240	100	1	1	1		
Baltzell Coal Co.,	Cambria.	1	25	1	25	50	1	2	30	1	240	100	1	1	1		
Lorain Steel Co.,	Cambria.	1	25	1	25	50	1	2	30	1	240	100	1	1	1		
Somerset Mining Co.,	Cambria.	1	25	1	25	50	1	2	30	1	240	100	1	1	1		
Lilly Coal & Yeagly,	Cambria.	1	25	1	25	50	1	2	30	1	240	100	1	1	1		
Moshannon Coal Co.,	Cambria.	1	25	1	25	50	1	2	30	1	240	100	1	1	1		
Murdoch Brothers,	Somerset.	3	300	3	300	300	3	3	100	1	400	200	1	1	1		
Reading Coal and Iron Co.,	Cambria.	3	300	3	300	300	3	3	100	1	400	200	1	1	1		
Fenn & Bituminous Coal Co.,	Cambria.	3	300	3	300	300	3	3	100	1	400	200	1	1	1		

TABLE I—Continued.

Names of Operators and Collieries.	County.	Number of Boilers.			Total horse power.	Locomotives.			Total horse power.	Number steam engines of all classes.	Total horse power.	Number pumps delivering water to surface.	Capacity in gallons per minute.	Quantity delivered to surface per minute.	Number electric dynamos.	Number air compressors.	
		Cylindrical.	Horse power.	Tubular.		Horse power.	Steam.	Air.									Electric.
Priscilla Coal Co.,	Cambria.																
J. W. Mentzer.	Cambria.																
Plymouth Coal Mining Co.,	Cambria.																
Merchants' Coal Co.,	Somerset.			2	600												
Samuel Styer,	Cambria.	1	35														
Stinson Coal Mining Co.,	Cambria.			5	545												
Stinson Coal and Coke Co.,	Cambria.			1	150												
South Fork Coal Co.,	Cambria.			5	600												
Standard Coal Co.,	Cambria.																
Robinson & Irwin,	Cambria.																
Shannon Coal Co.,	Somerset.			1	75												
Shannon Shaft Coal Co.,	Cambria.			3	252												
Valley Coal Co.,	Cambria.																
Wells Creek Coal Co.,	Somerset.			1	75												
T. S. Shoemaker & Co.,	Cambria.	1	35														
George Pierce & Sons,	Cambria.			3	35												
Central Coal Co.,	Cambria.																
Mountain Coal Co.,	Cambria.																
W. J. Williams,	Cambria.																
Totals,		49	9,355	134	10,017		4	19,372	127	15,076	73	25,875	13,315	42		51	

TABLE III—Showing the number of employees at each colliery in the Sixth Bituminous District during the year 1902.

Names of Operators and Col- lieries.	County.	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.								Grand total, inside and outside.			
		Mine foremen.	Assistant mine foremen.	Fire bosses.	Miners.	Machine runners.	Machine loaders.	Machine scrapers.	Drivers and runners.	Door boys and helpers.	Company men.	All other employes.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	Coke employes.	Book-keepers and clerks.		All other employes.	Total outside.	
Berwind-White Coal Mining Co.	Somerset	1	3	3	190	255	388	39	...	6	6	37	519	...	1	1	3	11	...	1	43	60	579
Bureka No. 30.	Somerset	1	1	1	36	368	36	...	9	9	32	420	...	1	1	3	9	33	54	543
Bureka No. 31.	Somerset	1	1	1	31	313	31	...	5	5	27	376	...	1	1	3	9	24	35	467
Bureka No. 32.	Somerset	1	1	1	25	225	25	...	6	6	49	376	...	1	1	4	11	31	46	422
Bureka No. 33.	Somerset	1	1	1	42	414	42	...	8	8	37	554	...	1	1	4	13	30	49	603
Bureka No. 34.	Somerset	1	1	1	27	267	27	...	6	6	58	374	...	1	1	3	9	23	42	486
Bureka No. 35.	Somerset	1	1	1	21	205	21	...	4	4	41	390	...	1	1	3	9	28	42	342
Bureka No. 36.	Somerset	1	1	1	7	79	7	...	1	1	12	107	...	1	1	1	10	11	25	132
Bureka No. 37.	Cambria	1	1	1	3	36	3	...	2	2	8	232	...	1	1	1	3	8	12	71
Bureka No. 38.	Somerset	1	1	1	190	4	4	4	1	7	14	246
Bureka No. 39.	Somerset	1	1	1
Yellow Run shaft.	Cambria	1	1	1
Totals.		11	23	...	190	255	2,555	255	21	57	59	325	3,754	1	10	35	89	...	12	279	426	4,180	
Webster Coal Co.	Cambria	1	1	...	50	...	64	8	10	2	14	1	87	1	...	2	1	...	1	5	10	97	
Webster No. 1.	Cambria	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Webster No. 2.	Cambria	1	1	...	152	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Webster No. 3.	Cambria	1	1	...	133	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Webster No. 4.	Cambria	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Webster No. 5.	Cambria	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Webster No. 6.	Cambria	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Webster No. 7.	Cambria	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Webster No. 8.	Cambria	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Webster No. 9.	Cambria	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals.		7	...	4	331	29	179	29	79	1	130	41	829	3	1	29	21	...	5	100	150	989	

Coulter & Huff.

Conemaugh,	1	.....	200	.....	.....	19	.....	6	.....	228	1	1	4	2	.....	1	15	24	250
Argyle,	1	.....	30	.....	.....	2	.....	2	.....	36	1	1	1	1	.....	1	.....	5	41
Kokomo,	1	.....	20	.....	.....	.....	.....	1	.....	24	.....	.....	.....	.....	.....	.....	.....	1	25
Totals,	3	.....	250	.....	.....	24	.....	9	.....	286	3	2	5	3	.....	2	15	30	316
A. J. Haws & Sons, Ltd.																			
Haws' shaft,	1	1	36	.....	.....	4	.....	3	.....	45	.....	.....	.....	1	.....	.....	6	7	52
Coopersdale,	1	.....	12	.....	.....	2	.....	.....	.....	15	.....	.....	.....	.....	.....	.....	.....	.....	15
Totals,	2	1	48	.....	.....	6	.....	3	.....	60	.....	.....	.....	1	.....	.....	6	7	67
Loyalhanna Coal and Coke Co.																			
Sonnen shaft No. 1,	1	1	136	.....	.....	18	2	13	.....	171	.....	1	2	6	.....	1	3	13	184
Loyalhanna No. 3,	1	.....	120	.....	.....	10	2	6	2	141	1	1	2	1	.....	1	3	9	150
Totals,	2	1	256	.....	.....	28	4	19	2	312	1	2	4	7	.....	2	6	22	334
Henrietta Coal Co.																			
Henrietta shaft No. 1,	1	.....	130	.....	.....	23	5	17	.....	176	1	.....	3	4	.....	.....	12	20	196
Henrietta shaft No. 2,	1	.....	55	.....	.....	3	.....	5	.....	65	.....	.....	1	4	.....	.....	8	13	78
Totals,	2	.....	185	.....	.....	26	6	22	.....	241	1	.....	4	8	.....	.....	20	33	274
A. F. Clark & Co.																			
Stony Creek,	1	.....	45	.....	.....	5	3	6	.....	60	1	.....	1	1	.....	1	3	7	67
Somerset,	1	.....	40	.....	.....	4	.....	5	.....	50	1	.....	1	.....	.....	1	3	6	56
Totals,	2	.....	85	.....	.....	9	3	11	.....	110	2	.....	2	1	.....	2	6	13	123
Maderia Coal Co.																			
Maderia No. 1,	1	.....	60	.....	.....	6	2	3	.....	72	.....	.....	1	.....	.....	1	1	3	75
Maderia Nos. 2 and 3,	1	.....	20	1	8	1	2	3	.....	36	.....	.....	.....	.....	.....	.....	3	3	39
Totals,	2	.....	80	1	8	1	8	2	6	108	.....	.....	1	.....	.....	1	4	6	114
Logan Coal Co.																			
Logan,	1	.....	108	.....	.....	12	3	12	3	139	1	.....	4	4	.....	1	8	18	157
Wagner,	1	.....	50	.....	.....	3	1	4	.....	59	1	.....	4	1	.....	.....	5	11	70
Totals,	2	.....	158	.....	.....	15	4	16	3	198	2	.....	8	5	.....	1	13	29	227
Somerset Coal Co.																			
Listic,	1	.....	100	4	1.0	4	15	8	4	6	212	1	.....	.....	.....	1	11	21	253
Stewart,	1	.....	5	6	25	6	.....	.....	.....	5	48	1	.....	.....	.....	.....	1	11	127
Wilson Creek,	1	.....	81	.....	.....	1	1	1	.....	81	1	.....	1	1	.....	1	1	1	86
Totals,	3	.....	186	10	12	10	22	9	1	12	381	3	.....	5	7	3	22	17	451

Somerset Coal Co.,	1	1	156	10	125	10	22	9	4	12	351	3	5	7	3	25	43	424
Cambria,.....	2	1	114				14	3	3	2	136	1	2	2	1	3	6	141
C. A. Bach,	1	1	30				10	1	2	2	107	1	1	2	1	4	10	116
S. Hamilton Coal Co.,	1	1	38	5	22	5	4	1	3	2	42	1	1	2	1	4	9	52
D. Laughman & J. Leahy,	1	1	32				8	1	5	3	51	1	1	1	1	4	7	58
Bando Coal Co.,	1	1	30				3	1			36	1	1	1		3	29	29
Bethel Coal Co.,	1	1	22				3				25	1	1	1		2	4	38
Munser Coal Co.,	1	1	20				3				25	1	1	1		2	4	38
D. Laughman,	1	1	50				15	1	1	4	72	1	1	3	1	4	10	82
Ferdinate Coal Co.,	1	1	18				2	1			19	1	1	1		1	3	23
Whitney, Kemmer & Holts,	1	1	68				6	1	2	1	22	1	1	1		1	6	58
Baltzell Coal Co.,	1	1	2	2	30	2	6	3	2	1	50	1	1	1		2	6	95
Loran Steel Co.,	1	1	19				2	1	1		22	1	1	1		1	3	25
Somerset Mining Co.,	1	1	31				2	1	1		36	1	1	1		1	6	40
Lilly Coal Co.,	1	1	121				11	3	3		139	1	1	1		12	15	154
Lawdelln & Yeagly,	1	1	60				3	2	1		36	1	1	1		1	3	32
Machlock Brothers,	1	1	37				4	2	1	3	29	1	1	4		4	12	83
Reading Coal and Iron Co.,	1	1	30	14	45	14	3	2	1	3	71	1	1	1		3	10	53
Penn'a Bituminous Coal Co.,	1	1	40				10	3	8		122	1	1	2	2	16	24	146
Priscilla Coal Co.,	1	1	27				5	1	1	12	125	1	1	1	1	8	15	140
Plymouth Coal Co.,	1	1	45				1	2	2		37	1	1	2	1	2	7	54
J. W. Mentzer,	1	1	109	8	54	8	10	2	15		201	1	1	1	1	2	6	44
Merchants' Coal Co.,	1	1	40				5	1	2		57	1	1	2		1	4	57
Somerset,	1	1	40				10	2	1		201	1	1	4		6	24	225
Samuel Styer,	1	1	238				4	1	10		46	1	1	1		1	3	49
Stinean Coal Mining Co.,	1	1	236				23	2	4		275	1	1	5		1	30	385
Stinean Coal and Coke Co.,	1	1	175				14	6	4	4	266	1	1	7		1	20	385
South Fork Coal Co.,	1	2	175				15	4		16	213	1	1	2		11	20	239
Stoddard Coal Co.,	1	1	56				7	1	1		65	1	1	1		2	1	67
Robinson & Irwin,	1	1	20				3	1	2		26	1	1	1		1	4	52
Shumaker Coal Co.,	1	1	10	7	15	7	3	1	4		48	1	1	1		1	9	156
Valley Coal Co.,	1	1	150				13	5	3	3	177	1	1	1		3	12	236
Wells Creek Coal Co.,	1	1	36				2	2	2		41	1	1	4		5	10	90
T. S. Shoemaker & Co.,	1	1	70				9	3	3		80	1	1	1		4	12	90
George Pierce & Sons,	1	1	90				6	2		8	87	1	1	1		1	10	97
Central Coal Co.,	1	1	24				3	1	1		70	1	1	1		1	10	80
Mountain Coal Co.,	1	1	15				2	1	1		70	1	1	1		1	10	80
W. J. Williams,	1	1	12				2	1	1		21	1	1	1		1	10	80
Totals,	55	27	4,450	323	3,244	357	628	290	443	541	10,862	73	97	152	3	70	1,210	12,311

TABLE III—Continued.

Names of Operators and Collieries.	County.	Number of Days Worked in Each Month.												Total.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
Berwind-White Coal Mining Co.,	Cam. & Som.	24	18.5	22	24	25.5	23.8	24.3	23.6	23.3	23.5	22.3	22.1	276.6
Webster Coal Co.,	Cambria.	19.8	13.2	17.6	18.9	19.4	20.7	20.7	20.6	19.1	18.2	18.5	18.1	250.9
Puritan Coal Co.,	Cambria.	18.5	21.5	21.2	21.5	19.5	20.7	20.5	20.5	20.1	19.5	18.5	18.5	230.9
Cambria Steel Co.,	Cambria.	18	19.3	21.2	21.2	23.5	21.7	23.7	25.3	25.3	27	24.8	25.8	280.8
W. H. Farnham & Co.,	Cambria.	18	21.3	21.3	21.2	17.7	18.3	18.3	18.3	21.3	18	17.3	17.3	233.9
Coal Hill Mining Co.,	Cambria.	20	17.7	20.3	20.7	23.7	22.7	23.3	23.7	22.7	22	22.3	19.3	258.1
A. J. Hayes & Sons, Ltd.,	Cambria.	26.5	24	26	26	25.5	24.5	25	25.5	24.5	25.5	24.5	25.5	303
Loyalhanna Coal and Coke Co.,	Cambria.	17.5	17	22.5	20	19	17.5	25	25.5	20	19.5	17	18.5	224
Henrietta Coal Co.,	Cambria.	26	24	26	25	26	24	26	26	23	26	24	23	289
A. F. Clark & Co.,	Somerset.	18	5	12.5	11	15	18	11	11	12	15	12	13	147
Madonia Coal Co.,	Somerset.	14.5	9	12	13.5	12	14	9	11	13	16	13	10	152.5
Logan Coal Co.,	Cambria.	21	20	24	21	25	23	22	22	16	23	27	24.5	289
Somerset Coal Co.,	Somerset.	.....	10	17	19	19	21	17	14	18	19	18	18	180
Cambria Coal Mining Co.,	Cambria.	14.5	11.5	19	20.5	20.5	21.5	22.5	18.5	24.5	22.5	17	20.5	233
C. A. Buch.,	Cambria.	21	14	15	21	20	24	20	20	18	20	15	12	220
S. Hamilton Coal Co.,	Somerset.	25	18	20	23	24	23	21	22	23	23	23	23	287
D. Loughman & J. Leahy,	Cambria.	15	14	17	16	17	17	21	18	17	18	14	11	209
Bando Coal Co.,	Somerset.	22	12	19	19	22	22	21	14	20	20	18	18	233
Bethel Coal Co.,	Somerset.	20	14	22	18	20	21	21	21	13	19	20	19	224
Bunker Coal Co.,	Cambria.	.....	19	14	15	20	12	15	18	23	22	19	23	195
Leighland Coal Co.,	Cambria.	23	22	18	24	25	20	20	20	23	21	18	20	241
Whitney Kemper & Halls,	Somerset.	20	21	12	14	13	16	14	15	18	19	18	23	240
Baltzell Coal Co.,	Cambria.	20	17	13	23	18	20	22	18	23	19	19	18	195
Loran Steel Co.,	Cambria.	27	24	26	23	24	23	20	27	23	25	25	25	282
Somerset Mining Co.,	Somerset.	17	11	12	16	19	19	14	15	20	12	14	14	183
Lilly Coal Co.,	Cambria.	20	15	13	15	22	24	22	19	20	16	17	17	220
Llewellyn & Yeager,	Cambria.	26	22	24	25	26	25	25	26	26	26	25	26	302
Moshannon Coal Co.,	Cambria.	20	10	13	19	17	18	22	16	20	19	20	17	211
Murdock Brothers,	Somerset.	18	11	16	19	25	22	22	14	23	23	17	17	225
Reading Coal and Iron Co.,	Somerset.	22	16	18	21	22	23	24	19	24	21	16	23	219

Penn'a Bituminous Coal Co.,	22	17	19	18	17	18	19	21	20	19	18	17	295
Priscilla Coal Co.,	23	12	18	17	18	18	17	18	18	17	17	13	297
J. W. Mentzer,	24	20	21	22	22	22	22	22	22	21	16	14	240
Lymouth Coal Co., . . . . .	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	97
Merchants' Coal Co., . . . . .	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	86
Somerset, . . . . .	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	217
Samuel Syer,	20	18	18	20	22	17	19	16	17	21	19	16	217
Cambria,	26	21	22	22	24	22	25	25	24	25	22	21	279
Cambria,	25	20	24	25	26	22	26	21	22	24	24	21	280
Stinemans Coal and Coke Co.,	22	19	21	20	19	20	21	21	21	21	20	17	242
Stullard Coal Co.,	23	12	13	15	23	20	23	21	23	23	16	20	232
Standard Coal Co.,	22	20	24	22	25	26	24	26	24	22	20	25	278
Robinson & Irwin,	14	15	18	18	17	20	12	12	8	4	12	13	170
Rhameck Coal Co.,	21	22	23	17	1	10	22	20	17	19	18	23	213
Somerset, . . . . .	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	135
Valley Coal Co.,	20	18	15	10	20	17	16	12	22	22	24	23	135
Wells Creek Coal Co.,	19	11	15	16	21	21	23	20	17	20	17	20	202
T. S. Shoemaker & Co.,	25	19	15	13	11	23	19	22	23	23	16	17	200
George Pierce & Sons, . . . . .	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	248
Central Coal Co., . . . . .	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	99
Mountain Coal Co., . . . . .	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10
W. J. Williams,	24	24	25	22	20	18	16	17	20	23	25	26	260

TABLE IV—List of fatal accidents that occurred in and about the mines of the Sixth Bituminous District for the year ending December 31, 1902.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan. 8	Mike Pinzelmis,	Austrian, ..	Miner,	54	M.	1	3	Eureka No. 30,	Somerset,....	Killed by electric shock; this man, with other, was drawing heading stumps; there was a piece of bad rock which they were pulling down, and he jumped back out of road of the falling rock and struck the back of his head against the trolley wire, which caused his death.
22	Frank Boras, Sr., ..	Hungarian,	Miner,	45	M.	1	7	Sonman No. 1 drift, or Wilmore No. 1.	Cambria,....	Fatal accident by a fall of coal, caused the death of the victim to leave a stump under the coal or sprag it.
Feb. 27	Anton Zack,	Polish,	Loader,	38	M.	1	3	Eureka No. 34,	Somerset,....	This man had pushed his car out of the room and it stopped on the switch, and he went around on the wire side to pull out a sprag, when he struck his head against the trolley wire, which killed him.
April 19	Joseph Monday,	Polish,	Loader,	34	S.	.....	.....	Eureka No. 37,	Cambria,....	This man was killed by electric wire while lifting a car on the track with a rail for a lever, which slipped and threw him against the electric wire, causing his death from electric shock.
28	Andra Buzar,	Italian,	Miner,	27	M.	1	3	Alton,	Cambria,....	Killed by a fall of rock; he was working in a narrow cross cut, and a faulty piece of timber at top fell on him; it was unavoidable.
June 3	Michel Joke,	Slovak,	Miner,	35	M.	1	3	Sonman shaft No. 1,	Cambria,....	Was killed by a fall of coal; this accident was unavoidable.
11	Peter Metarko,	Slovak,	Machine cutter,	29	M.	1	3	Eureka No. 33,	Somerset,....	Neck broken by fall of coal and rock; he was undermining, when a slip in the rock was reached and the rock and coal fell; accident was unavoidable.

30	John Kepe,	Hungarian,	Miner,	36	M.	Conemaugh slope, ..	Cambria,	Burned to death by an explosion of powder; he took a five-pound can of powder into the mine early in the morning, and to open the keg he struck a hole in it with a pick, which, no doubt, ignited the powder; the can was found and the top, with a pick hole in it.
July	7	Phillip Tungats, ...	Italian,	Miner,	33	M. 1	Sonman No. 2,	Was killed through violating the mine rules; he started to walk up the plane, and a trip was coming down and the cars jumped the track and caught him, killing him; he was warned by the plane man not to walk out but to take the regular walking road, but would not.
10	112 killed by gas ex-	plosion,	Miner,	35	M. 1	Rolling Mill,	Cambria,	Killed by a fall of draw slate.
11	Barno Morabit,	Italian,	Miner,	37	M. 1	Eureka No. 34,	Somerset,	This man, with others, was blasting some sand rock; he went back to a box to prepare a piece of dynamite and in some unknown manner the piece exploded, which exploded the balance of the dynamite, causing a terrible explosion, blowing him to pieces.
13	John Savitch,	Slovak	Rockman,	37	M. 1	Eureka No. 34,	Somerset,	Shocked to death by electricity; this man was on the road and the cable came swinging, and he turned out on the side where the wire was, instead of the other side, and while standing there he struck his head against the wire, which killed him.
19	John Banal,	Russian, ...	Miner,	19	S.	Eureka No. 30,	Somerset,	Was killed by a fall of coal; he undertook to undermine the coal between where he had put in two holes without any sprag or stump under the coal; it was a gross carelessness on the part of the victim himself.
24	Andy Yandura,	Polish,	Miner,	19	S.	Webster No. 3,	Cambria,	Killed by electricity; this man was walking along the road here with his hand on the top of the road, a small wire from a trolley wire into tool shanty and he took hold of it and it caused his death.
Aug.	9	George Bresko,	Polish,	Miner,	23	M. 1	Eureka No. 35,	Finally injured by a fall of draw slate, which should be pulled down after a fall of coal or propped before another cut is made, but unfortunately the victim of this accident did neither, and he was fatally injured by it falling on him; he died in three days after.
20	Mike Pleklo,	Polish,	Miner,	34	M. 1	Sonman shaft No. 2,	Cambria,	Was killed by a fall of rock; while drilling a hole in his coal, a piece of rock fell out of a pot hole in the roof; it was an unavoidable accident.
23	Demicure Kuk,	Hungarian,	Leader,	25	S.	Eureka No. 37,	Cambria,	

TABLE IV—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
27	Albert Lotsick,	Polish,	Miner,	19	S. ....	.....	.....	Sonman shaft No. 1,	Cambria,....	Head badly crushed by a fall of draw slate, which he should have either drawn down or put a prop under it.
Sept. 17	George Kesperlusk, ..	Hungarian,	Loader,	45	M. 1	5	.....	Eureka No. 37,	Cambria,....	Head crushed by a fall of rock; this was an unavoidable accident; two slips which came together in the roof and were not visible, caused the rock to fall, killing him instantly.
Oct. 7	Louis Moisish,	Hungarian, ..	Miner,	39	M. 1	1	.....	Eureka No. 34,	Somerset,....	Killed by a fall of coal; coal fell off a slip and struck him on the temple; it was a very small lump of coal, but it killed him instantly.
19	Edward Hammel, ..	American, ..	Spragger,	23	S. ....	.....	.....	Eureka No. 32,	Somerset,....	Was surging, and in going in on the motor he leaned back and his head struck a prop, which knocked him off and he was crushed to death.
										Killed by a fall of rock; Tapensky sat down beside Dembrosky, who was loading a car, when, suddenly, several tons of rock fell on the both men, killing them; the place was well propped, but there was a clay vein on one side of the road; was an unavoidable accident.
Dec. 4	Frank Dembrosky, ...	Polish,	Loader,	20	S. ....	.....	.....	Eureka No. 31,	Somerset,...	
4	Adam Tapensky, ...	Polish,	Scraper,	29	S. ....	.....	.....	Eureka No. 31,	Somerset,...	

TABLE IV—Continued.

List of fatal accidents that occurred in Rolling Mill Mine by an explosion of gas, July 10, 1902.

Name of Person.	U. S. citizen.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	County.
Emerick Basista,	No. ..	Slovak, ..	Miner,	26	S. ....	.....	.....	Cambria.
Stephen Simko,	No. ..	Magyar, ..	Miner,	44	M.	1	5	Cambria.
John Novak,	No. ..	Polish,	Miner,	35	S. ....	.....	.....	Cambria.
Anton Lazarsky,	No. ..	Polish,	Miner,	25	M.	1	1	Cambria.
Paul Lazarsky,	No. ..	Polish,	Miner,	29	M.	1	4	Cambria.
Frank Lazarsky,	No. ..	Polish,	Miner,	23	S. ....	.....	.....	Cambria.
Valentine Plaga,	No. ..	Polish,	Pipe man,	27	M. ....	.....	3	Cambria.
Michael Sabott,	No. ..	German,	Coupler,	29	S. ....	.....	.....	Cambria.
Stanis Dobrzynieski,	No. ..	Polish,	Miner,	33	M.	1	.....	Cambria.
Stanis Zioka,	No. ..	Polish,	Miner,	31	S. ....	.....	.....	Cambria.
Bolesla Wiscotsky,	No. ..	Polish,	Miner,	24	M.	1	1	Cambria.
John Hotej,	No. ..	Slovak,	Miner,	41	M.	1	4	Cambria.
John Karesoviach,	No. ..	Polish,	Miner,	40	M.	1	6	Cambria.
Michael Shilovinetz, Sr.,	Yes, ..	Croatian, ..	Miner,	4	M.	1	.....	Cambria.
Michael Shilovinetz, Jr.,	No. ..	Croatian, ..	Miner,	17	S. ....	.....	.....	Cambria.
John C. Whitney,	Yes, ..	Welsh,	Fire boss,	50	M.	1	8	Cambria.
William Blanch,	Yes, ..	English,	Labor boss,	5	M.	1	1	Cambria.
J. R. Thomas,	Yes, ..	Welsh,	Fire boss,	53	M.	1	.....	Cambria.
Joseph Tomlinson,	Yes, ..	English,	Fire boss,	3	S. ....	.....	.....	Cambria.
Jacob Hull,	Yes, ..	Polish,	Miner,	42	M.	1	2	Cambria.
Ladis Domrosky,	No. ..	Polish,	Miner,	27	S. ....	.....	.....	Cambria.
Joseph Yurotovich,	No. ..	Croatian, ..	Miner,	27	S. ....	.....	.....	Cambria.
Andrew Bulischak,	No. ..	Slovak,	Cutter,	23	M.	1	.....	Cambria.
Michael Bulischak,	No. ..	Slovak,	Scraper,	31	M.	1	.....	Cambria.
Tony Vergosh,	No. ..	Croatian, ..	Miner,	29	S. ....	.....	.....	Cambria.
George Tvarosmny,	No. ..	Slovak,	Miner,	1	S. ....	.....	.....	Cambria.
Frank Andrzejewski,	No. ..	Polish,	Scraper,	2	M.	1	1	Cambria.
John Feher,	No. ..	Magyar,	Miner,	2	M.	1	3	Cambria.
John Crook,	Yes, ..	American, ..	Cutter,	2	M.	1	3	Cambria.
Jacob Crook,	Yes, ..	American, ..	Cutter,	2	M.	1	3	Cambria.
John Sedlak,	No. ..	Polish,	Miner,	2	M.	1	.....	Cambria.
Frank Poznialk,	No. ..	Polish,	Cutter,	2	S. ....	.....	4	Cambria.
John Bartok,	No. ..	Slovak,	Miner,	2	S. ....	.....	4	Cambria.
John Galayda,	No. ..	Slovak,	Miner,	2	S. ....	.....	.....	Cambria.
Jacob Bilshifsky,	No. ..	Polish,	Miner,	2	S. ....	.....	.....	Cambria.
Peter Baran,	No. ..	Polish,	Scraper,	2	S. ....	.....	.....	Cambria.
Anthony Andrzejewski,	No. ..	Polish,	Miner,	2	M.	1	1	Cambria.
Ladis Kava,	No. ..	Polish,	Miner,	2	M.	1	.....	Cambria.
Anton Killian,	No. ..	Polish,	Miner,	4	S. ....	.....	.....	Cambria.
John Krajofsky,	No. ..	Polish,	Miner,	2	M.	1	.....	Cambria.
Phillip McCann,	Yes, ..	Irish,	Miner,	2	M.	1	1	Cambria.
Michael McCann,	Yes, ..	Irish,	Miner,	1	M.	1	.....	Cambria.
George Hologyak,	No. ..	Slovak,	Miner,	2	M.	1	.....	Cambria.
Joseph Zaba,	No. ..	Polish,	Miner,	2	M.	1	.....	Cambria.
Andrew Kubenko,	No. ..	Slovak,	Miner,	2	M.	1	.....	Cambria.
Anton Cyburt,	No. ..	Polish,	Miner,	4	M.	1	.....	Cambria.
Stephen Koosis,	No. ..	Magyar,	Miner,	1	S. ....	.....	.....	Cambria.
Jacob Walchik,	No. ..	Polish,	Miner,	1	M.	1	1	Cambria.
Michael Wilk,	Yes, ..	Polish,	Miner,	2	S. ....	.....	.....	Cambria.
Paul Klatch,	No. ..	Polish,	Miner,	2	S. ....	.....	.....	Cambria.
Andrew Zaidel,	No. ..	Polish,	Miner,	2	S. ....	.....	.....	Cambria.
John Lacko,	No. ..	Slovak,	Miner,	2	M.	1	4	Cambria.
Michael Prezuhy,	No. ..	Slovak,	Miner,	2	M.	1	1	Cambria.
George Prahovitch,	No. ..	Croatian, ..	Miner,	2	M.	1	.....	Cambria.
Frank Tibursky,	No. ..	Polish,	Miner,	2	M.	1	.....	Cambria.
Andrew Hovaldo,	No. ..	Slovak,	Miner,	2	M.	1	.....	Cambria.
Branis Tetkofsky,	No. ..	Polish,	Miner,	2	M.	1	.....	Cambria.
Wm. Lees,	Yes, ..	English,	Miner,	2	S. ....	.....	1	Cambria.
Daniel Lees,	Yes, ..	English,	Miner,	2	S. ....	.....	.....	Cambria.
John Tyulise,	No. ..	Polish,	Miner,	2	S. ....	.....	.....	Cambria.
John Colton,	No. ..	Polish,	Miner,	2	M.	1	.....	Cambria.
Stephen Burna,	No. ..	Polish,	Miner,	2	S. ....	.....	.....	Cambria.
Peter Senuak,	No. ..	Slovak,	Miner,	2	M.	1	1	Cambria.
John Gombasky,	No. ..	Polish,	Miner,	2	M.	1	1	Cambria.
Vincent Chesla,	No. ..	Polish,	Miner,	2	M.	1	.....	Cambria.
Peter Warhova,	No. ..	Polish,	Miner,	2	M.	1	.....	Cambria.
Stephen Turiseak,	No. ..	Slovak,	Miner,	2	M.	1	4	Cambria.
Jacob Strvas,	No. ..	Slovak,	Scraper,	2	S. ....	.....	.....	Cambria.
Woychek Pekla,	No. ..	Polish,	Miner,	2	M.	1	.....	Cambria.
George Babela,	No. ..	Slovak,	Laborer,	2	M.	1	.....	Cambria.
Martin Vrbjar,	No. ..	Slovak,	Laborer,	2	M.	1	.....	Cambria.

TABLE IV—Continued.

Name of Person.	U. S. citizen.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	County.
Paul Cverna,	No, ..	Slovak,	Laborer,	22	M.	1	3	Cambria.
Woychek Pzibila,	No, ..	Polish,	Miner,	22	M.	1	1	Cambria.
Wasily Spontek,	No, ..	Slovak,	Miner,	24	M.	1	1	Cambria.
John Sandor,	No, ..	Polish,	Driver,	24	M.	1	1	Cambria.
Gotfried Hepke,	Yes, ..	German,	Miner,	24	M.	1	1	Cambria.
Paul Vrabel,	No, ..	Slovak,	Miner,	22	S.	...	...	Cambria.
Matthew Woychik,	No, ..	Polish,	Miner,	38	S.	...	...	Cambria.
Frank Gusik,	No, ..	Polish,	Miner,	24	M.	1	1	Cambria.
Michael Dricsa,	No, ..	Polish,	Miner,	24	S.	...	...	Cambria.
Valentine Wenvlosky,	No, ..	Polish,	Miner,	25	S.	...	...	Cambria.
Parhell Sutula,	No, ..	Polish,	Miner,	25	M.	1	4	Cambria.
John Struzynski,	No, ..	Polish,	Cutter,	33	M.	1	5	Cambria.
Frank Bomber,	No, ..	Polish,	Miner,	22	S.	...	...	Cambria.
Michael Bulosh,	No, ..	Polish,	Miner,	25	S.	...	...	Cambria.
Lawrence Pazniak,	No, ..	Polish,	Laborer,	30	S.	...	...	Cambria.
Adam Yakuvosky,	No, ..	Polish,	Miner,	27	S.	...	...	Cambria.
Yasemby Cebula,	No, ..	Polish,	Miner,	33	M.	1	1	Cambria.
John Wallawender,	No, ..	Polish,	Miner,	33	M.	1	...	Cambria.
Joseph Kolak,	No, ..	Polish,	Trackman,	22	S.	...	...	Cambria.
John Bozak,	No, ..	Polish,	Bricklayer,	29	M.	1	3	Cambria.
Joseph Ristic,	No, ..	Polish,	Laborer,	22	S.	...	...	Cambria.
Ludwig Shalonka,	No, ..	Polish,	Track man,	23	S.	...	...	Cambria.
Andrew Babela,	No, ..	Slovak,	Laborer,	34	M.	1	3	Cambria.
Victor Bachia,	No, ..	Croatian, ..	Miner,	21	S.	...	...	Cambria.
Jacob Maslosky,	No, ..	Polish,	Track man,	21	S.	...	...	Cambria.
Joseph Franko,	No, ..	Slovak,	Miner,	33	M.	1	1	Cambria.
John Ropicky,	No, ..	Slovak,	Miner,	36	M.	1	3	Cambria.
George Petercsak,	No, ..	Magyar, ...	Miner,	31	M.	1	1	Cambria.
Michael Evok,	No, ..	Croatian, ..	Miner,	23	M.	1	1	Cambria.
Anton Dehlis,	No, ..	Croatian, ..	Miner,	21	S.	...	...	Cambria.
Mike Basenats,	No, ..	Croatian, ..	Pipe man,	34	S.	...	...	Cambria.
Steve Barestich,	No, ..	Croatian, ..	Miner,	27	S.	...	...	Cambria.
Peter Sandor,	No, ..	Polish,	Miner,	18	S.	...	...	Cambria.
Gustave Lavendrofsky,	Yes, ..	German,	Miner,	39	M.	1	5	Cambria.
William Shanzek,	Yes, ..	German,	Miner,	23	M.	1	2	Cambria.
Michael Jucsko,	No, ..	Slovak,	Miner,	30	S.	...	...	Cambria.
Andy Moskal,	No, ..	Slovak,	Miner,	43	M.	1	...	Cambria.
Mike Moskal,	No, ..	Slovak,	Miner,	16	S.	...	...	Cambria.
Andy Garlogy,	No, ..	Polish,	Driver,	31	M.	1	...	Cambria.
John Rachia,	No, ..	Croatian, ..	Miner, .....	...	M.	1	1	Cambria.
John Retallack,	Yes, ..	English, ...	Fire boss,	54	M.	1	7	Cambria.

TABLE V.—List of non-fatal accidents that occurred in and about the mines of the Sixth Bituminous District for the year ending December 31, 1902.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan. 2	Alfred L. Mansfield, ..	American, ..	Spranger,	21	S.	Eureka No. 34,	Somerset,	Injured by a motor.
1	Richard Madison,	American,	Miner,	15	S.	Webster No. 3,	Cambria,	Was struck by the hauling rope.
27	Robert Farnham,	American,	Miner,	23	S.	Washington No. 2,	Cambria,	Ankle dislocated by a fall of slate.
Feb. 10	Joe P. Harkins,	Hungarian,	Miner,	22	M.	Stuart,	Somerset,	Scalp wound, caused by a blast.
13	A. L. Hattie,	American,	Miner,	22	M.	Listie,	Somerset,	Foot broken by being caught in the chain of an electric cutter.
19	John Cook,	Scotch,	Boss driver,	32	M.	Webster No. 1,	Cambria,	Fracture of foot.
March, 7	N. G. Warkins,	American,	Miner,	37	M.	Guemuloning No. 2,	Somerset,	Injured by a fall of coal.
8	John Vinsnick,	Polish,	Leader,	22	S.	Eureka No. 34,	Somerset,	Leg broken by a lump of coal striking it.
April 12	Alex. Tontebous,	Lithuanian,	Miner,	25	S.	Eureka No. 32,	Somerset,	Back badly injured by a fall of rock.
13	Cassimer Jones,	Polish,	Miner,	33	S.	Somerset shaft No. 2,	Cambria,	Three ribs broken.
12	John Coons,	Polish,	Miner,	35	S.	Standard,	Cambria,	Shoulder broken, struck by small piece of coal.
21	Paul Fvorskoskie,	Polish,	Leader,	23	S.	Eureka No. 34,	Somerset,	Ribs broken by being caught between cars and dead frame.
May 28	Tony Wisnicky,	Slavonic,	Miner,	33	S.	Webster No. 5,	Cambria,	Injured by a fall of rock.
19	Grant Berkstresser, ..	American, ..	Asst. foreman, ..	31	M.	Eureka No. 34,	Somerset,	Wrist badly injured by the motor, and jumped off while it was in motion.
June 28	Joseph Straub,	German,	Leader,	17	S.	Eureka No. 37,	Somerset,	Fracture of leg, caught between the bumpers of the cars.
29	Lewis Matthews,	French,	Miner,	46	S.	Beetledon,	Cambria,	Injured by a fall of slate.
30	John Bell,	English,	Driver,	23	S.	Arcyle,	Cambria,	Injured by being caught between car and the frame of a door.
July 15	Redger Harvey,	American, ..	Rock man,	37	M.	Eureka No. 31,	Somerset,	Injured by an explosion of dynamite.
Aug. 6	Levon Lavis,	American, ..	Spranger,	31	S.	Eureka No. 36,	Somerset,	Injured by being caught by car.
26	John Szulack,	Polish,	Leader,	33	S.	Eureka No. 32,	Somerset,	Leg broken by a fall of slate.
Sept. 3	Thomas Smith,	Polish,	Leader,	26	M.	Webster No. 4,	Somerset,	Crushed under a fall of coal.
4	Joseph Pugh,	Hungarian, ..	Leader,	21	S.	Eureka No. 34,	Somerset,	Injured by a fall of rock.
Oct. 1	Miller Prank,	Silvanian, ..	Miner,	18	M.	Beetledon,	Somerset,	Leg broken by a fall of slate.
8	Joe Lincolts,	Silvanian, ..	Miner,	28	M.	Eureka No. 3,	Cambria,	Leg broken by a fall of slate.
21	Geo. Holabach,	Silvanian, ..	Miner,	28	M.	Hornet shaft,	Cambria,	Collar bone broken and injured internally by a fall of coal.

TABLE V—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Nov. 28	George Dudz.	Slavonic.	Miner.	27	M.	Dysart.	Cambria.	Injured by a fall of slate and coal.
Nov. 19	Wm. Hesketh.	English.	Driver.	23	M.	Etinean No. 1.	Cambria.	Injured by being caught between cars.
Nov. 13	Mike Himecine.	Hungarian.	Miner.	27	M.	Eureka No. 30.	Somerset.	Compound fracture of right leg.
Dec. 22	Stephen Albertson.	English.	Miner.	31	M.	Saman shaft No. 2.	Cambria.	Injured by a fall of coal.
Dec. 12	Daniel Gray.	American.	Laborer.	20	S.	Webster No. 5.	Cambria.	Foot crushed, caught between cars.

Seventh Bituminous District.

ALLEGHENY AND WASHINGTON COUNTIES.

Idlewood, Pa., March 23, 1903.

Hon. James W. Latta, Secretary of Internal Affairs, Harrisburg, Pa.

Sir: I have the honor of presenting to you my annual report as Inspector of Mines of the Seventh Bituminous Coal District for the year ending December 31st, 1902. I am glad to report that the mines in this district are, with few exceptions, in reasonably good condition, both as regards ventilation and other matters relative to healthfulness and safety. Several new fans were installed during the year, and nearly all of the mines are now equipped with ventilating appliances equal to the requirements, if properly utilized. In part of the district the problem of mine drainage is a difficult one, as a number of the mines are working under very shallow strata, and during the rainy seasons the surface water flows through the strata into the mines in such large volumes as to flood the workings, in some cases necessitating a suspension of operations until the inflow subsides.

The total quantity of coal produced was 9,523,600 tons, which is 1,296,895 tons more than in 1901. The increase in production would have been much larger but for the fact that operations were greatly retarded by the inability of the railroads to transport the product to market.

The report contains a brief description of the condition of the mines by groups, also remarks as to the causes of many of the accidents, together with the usual tables, all of which are respectfully submitted.

Yours respectfully,

JAMES BLICK,
Inspector.

Summary of Statistics for 1902.

Number of mines in district,	84
Number of mines in operation during 1902,	32
Number of tons of coal produced,	9,523,600
Number of tons shipped to market,	9,183,564
Number of tons sold at mines to local trade,	186,471
Number of tons consumed at mines in generating steam and heat,	153,565
Number of tons produced by pick mining,	3,718,734
Number of tons produced by compressed air machines, ..	2,340,900
Number of tons produced by electrical machines,	3,463,966
Number of persons employed inside the mines,	11,832
Number of persons employed outside, including coke workers,	1,737
Number of fatal accidents inside the mines,	39
Number of tons produced for each fatal accident inside, ..	244,426
Number of persons employed per fatal accident inside, ..	303
Number of fatal accidents outside,	1
Number of persons employed per fatal accident outside, ..	1,737
Number of wives made widows by fatal accidents,	17
Number of children orphaned by fatal accidents,	34
Number of non-fatal accidents inside of mines,	127
Number of persons employed per non-fatal accident in- side,	93
Number of non-fatal accident outside,	7
Number of persons employed per non-fatal accident out- side,	248
Number of steam locomotives used inside,	4
Number of compressed air locomotives used inside,	1
Number of electric motors used inside,	48
Number of fans used for ventilation,	51
Number of furnaces used for ventilation,	29
Number of gaseous mines in operation during 1902,	41
Number of non-gaseous mines in operation during 1902, ..	40
Number of new mines opened in 1902,	12
Number of old mines abandoned during 1902,	2

Production of Coal by Counties During the Year 1902.

In the Seventh Bituminous District.	Tons.
Allegheny county,	7,477,675
Washington county,	2,045,925
Total,	9,523,600

A. Production of Coal During the Year 1902.

Names of Companies.	Tons.
Pittsburg Coal Co.,	6,009,082
New York and Cleveland Gas Coal Co.,	745,543
Monongahela River Consolidated Coal and Coke Co.,...	450,586
Midland Coal Co.,	402,235
Carnegie Coal Co.,	177,229
Witch Hazel Coal Co.,	105,677
Pittsburg Terminal Railroad and Coal Co.,	6,150
Mansfield Coal and Coke Co.,	435,656
Pittsburg and Buffalo Co.,	357,870
Meadow Lands Coal Co.,	154,310
United Coal Co.,	69,524
John M. Greek,	20,100
Amyville, Youghioghny Gas Coal Co.,	63,973
Pan Handle Mining Co.,	104,598
National Mining Co.,	7,832
Mankedick Coal Co.,	52,100
F. W. Hanford,	13,503
Verner Coal and Coke Co.,	26,149
Bulger Block Coal Co.,	97,406
Chartiers Coal and Coke Co.,	40,085
P. F. Hormel,	20,039
Thomas Fox Estate,	13,370
Pittsburg and Castle Shannon Railroad Co.,	94,742
W. S. B. Hays,	10,146
Weinman Brothers,	11,988
G. Vogele,	7,127
Patterson & Robbins,	12,590
Kramer & Foulitz,	14,000
Total,	9,523,610

C. Classification of Fatal Accidents for the Year 1902.

	Inside of Mines.							Outside of Mines.																
	By Falls of			By mine cars.	By explosion of gas.	Smothered by gas.	Powder and dynamite.	By blasts, etc.	Shafts.	Slopes.	Manways, breasts, etc.	Crushed at batteries.	By mules.	Suffocated by coal, etc.	Miscellaneous causes.	Total inside.	By cars.	By machinery.	By suffocation.	By boiler explosions.	Miscellaneous causes.	Total outside.	Grand total.	
	Coal.	Slate.	Roof.																					
February,		1	1	2													4						4	
March,				1																			1	
April,		1																						
May,		2																						
June,	1	2																						
July,		1		1																				
August,		1		1																				
September,		4	1		1																			
October,	1	1																						
November,																								
December,																								
Totals,	2	24	2	7	1											3	39					1	1	40

D. Classification of Non-fatal Accidents for the Year 1902.

	Inside of Mines.										Outside of Mines.									
	By Falls of			By Falling into			By blasts, etc.	Powder and dynamite.	Smothered by gas.	By explosion of gas.	By mine cars.	By explosion of gas.	Total inside.	By cars.	By machinery.	By suffocation.	By boiler explosions.	Miscellaneous causes.	Total outside.	Grand total.
	Coal.	Shaft.	Roof.	Shafts.	Slopes.	Manways, breasts, etc.														
January.	4	6	...	...	...	...	...	...	...	...	...	...	13	1	...	...	...	1	...	13
February.	1	4	...	...	...	...	...	...	...	...	...	...	9	1	...	...	...	2	...	11
March.	...	...	...	...	...	...	...	...	...	...	...	...	10	1	...	...	...	3	...	13
April.	3	7	...	...	...	...	...	...	...	...	...	...	12	...	...	...	...	...	...	8
May.	...	3	...	...	...	...	...	...	...	...	...	...	13	...	...	...	...	...	...	12
June.	...	3	...	...	...	...	...	...	...	...	...	...	10	...	...	...	...	...	...	9
July.	...	3	...	...	...	...	...	...	...	...	...	...	16	...	...	...	...	...	...	14
August.	10	11	...	...	...	...	...	...	...	...	...	...	20	11	...	...	...	1	...	31
September.	...	...	...	...	...	...	...	...	...	...	...	...	7	...	...	...	...	...	...	7
October.	3	7	...	...	...	...	...	...	...	...	...	...	11	...	...	...	...	...	...	11
November.	...	...	...	...	...	...	...	...	...	...	...	...	11	...	...	...	...	...	...	11
December.	1	7	1	...	...	...	...	...	...	...	...	...	11	...	...	...	...	...	...	...
Totals.	18	60	1	37	...	...	3	...	...	3	37	...	128	3	...	...	...	4	6	134

E. Occupations of Employes Killed or Fatally Injured Inside and Outside the Mines of the Seventh Bituminous District During 1902.

Months.	Inside.											Outside.							Grand total.		
	Mine foremen.	Assistant mine foremen.	Fire bosses.	Miners.	Machine runners.	Machine loaders.	Machine scrapers.	Drivers and runners.	Door boys and helpers.	Company men.	All other employes.	Total Inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Firemen and firemen.	Coke employes.	Book-keepers and clerks.		All other employes.	Total outside.
February.				1	1	1						4									4
March.																					
April.																					
May.				2	1																
June.																					
July.																					
August.																					
September.				2	1	1	1	1		1		7							1		1
October.																					
November.																					
December.				1								1									
Totals.				6	3	21	2	2		2		38							1		40

G. Nationality of Employes Killed or Fatally Injured Inside and Outside the Mines During 1902.

	Americans.	English.	Scotch.	Irish.	Germans.	Poles.	Hungarians.	Italians.	Slavs.	Austrians.	Russians.	Belgians.	Total.
February,		1			1		1				1		4
March,						1				2	1		4
April,		1			1			1					3
May,							1	1	2				4
June,							1	1					2
July,								2					2
August,						1	2	2		2		1	6
September,	1						1						2
October,						1	1		1	1			4
November,	1										1		2
December,			1			1				1	1		4
Totals,	2	2	1	1	2	4	7	6	3	6	5	1	40

H. Nationality of Employes Severely Injured Inside and Outside the Mines During 1902.

	Americans.	English.	Welsh.	Scotch.	Irish.	Germans.	Poles.	Hungarians.	Italians.	Slavs.	Lithuanians.	Austrians.	Russians.	Swedes.	French.	Tyroleans.	Belgians.	Spaniards.	Total.
January,	12				2		1	2	1				1				2	2	17
February,	12	1	1			1	2		2	1	2								17
March,	12	1				1	1		1	1	1		1				2		13
April,	3					1	1		1	1	1				1		1		8
May,	6	1				1	1	1	1	1							1		12
June,	4			1		1	1	1	1	1									9
July,	1					2	2	2	1	1							1		11
August,	6			1		1	3	4				1							21
September,	2	1				3	3	1	1										7
October,	2	1				1	1		1			2							7
November,	1				2	2	3			1			1		3				11
December,	3	1					2		1			1				1	2		11
Totals,	35	5	1	2	4	9	23	7	15	5	3	5	2	1	5	1	9	2	124

I. Giving names of operators and mines, kind of openings, type and size of fans; size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each employee per minute in Seventh Bituminous District for the year 1902.

Names of Operators and Mines.	Kind of opening.	Gasous or non-gasous.	Method of ventilation.	Diameter and width of fan in feet.	Water gauge developed—in inches.	Name of fan.	Power used.	Area of furnace bars in square feet.	Number of air splits of air currents.	Number of cubic feet of air per minute entering the mine at inlet.	Total quantity of air per minute circulating in all the splits in cubic feet.	Number of cubic feet per minute passing out at out- let.	Number of persons employed inside.	Average number of cubic feet per minute provided for each person.
Pittsburg Coal Co.														
Moon Run.....	Drift...	Non-gas.	Fan and furnace.	8 x 6	1.7	Capell, ...	Steam.	30	8	182,000	163,200	182,000	471	386
First Pool No. 1.....	Drift...	Gasous.	Fan...	24 x 7.5	.7	Brazil, ...	Steam.				92,000	121,000	265	456
First Pool No. 2.....	Shaft...	Gasous.	Fan...	13.5 x 7	.8	Capell, ...	Steam.		4	47,500	62,000	62,000	215	290
Junble.....	Drift...	Gasous.	Fan...	10 x 4.4	1.6	Capell, ...	Steam.		4	40,000	75,000	75,000	181	414
Priler Hill.....	Drift...	Gasous.	Fan...	20 x 6	1.2	Vulcan, ...	Steam.		4	51,000	30,300	30,300	212	241
Staked No. 1.....	Drift...	Non-gas.	Fan...	20 x 6	.6	Vulcan, ...	Steam.		9	59,040	78,600	78,600	225	349
Staked No. 2.....	Drift...	Non-gas.	Fan...	20 x 6		Vulcan, ...	Steam.	48		21,500	21,500	39,000	134	195
Laurel Hill No. 2.....	Shaft...	Gasous.	Fan...	20 x 6	7	Vulcan, ...	Steam.			26,000	44,000	44,000	166	208
Oak Ridge.....	Drift...	Non-gas.	Fan...	11 x 4.4	2.5	Capell, ...	Steam.		1	30,600	31,800	31,800	118	400
National.....	Drift...	Gasous.	Furnace.	12 x 4	.3	Brazil, ...	Steam.	56		12,000	12,000	21,700	78	454
Cherry.....	Drift...	Non-gas.	Furnace.				Steam.	64		15,000	15,000	31,000	86	300
Boyd.....	Drift...	Gasous.	Furnace.				Steam.	48		16,500	32,000	32,000	135	237
Fort Pitt.....	Drift...	Non-gas.	Furnace.				Steam.	72		17,500	29,000	29,000	146	198
Grant.....	Drift...	Non-gas.	Furnace.				Steam.	25		13,000	22,400	22,400	121	185
Idlewood.*.....	Drift...	Gasous.	Fan...	16 x 6		Capell, ...	Steam.		3	38,000	30,700	38,000	297	183
Nixon.....	Drift...	Gasous.	Fan...				Steam.		3	29,700	42,000	42,000	105	400
Leasdale.....	Drift...	Gasous.	Furnace.				Steam.	44		67,000	29,600	29,600	182	368
Junble Hill.....	Drift...	Gasous.	Fan...	18 x 5	1.3	Vulcan, ...	Steam.			21,300	39,600	39,600	124	319
Brickerville.....	Drift...	Gasous.	Furnace.	12 x 4.5		Brazil, ...	Steam.			45,100	31,800	208	452	517
Bon.....	Drift...	Non-gas.	Furnace.				Steam.	40		16,500	41,000	41,000	85	125
Allison.....	Slope...	Gasous.	Fan...	12 x 5	7	Pallock, ...	Steam.			27,000	27,000	27,000	177	283
Morgan.....	Slope...	Gasous.	Fan...	13.5 x 5.5	.7	Capell, ...	Steam.			53,000	96,000	96,000	218	440
Vulcan.....	Slope...	Gasous.	Fan...				Steam.							

* Under construction.

Laurel Hill No. 3.	Shaft...	Gasous.	Fan.	16 x 5	.6	Vulcan.	Steam.	3	35,000	62,000	198	313
Cresdmore,	Drift...	Gasous.	Fan.	16 x 8	.6	Wilson.	Steam.	4	56,940	81,000	183	443
Ridgeway,	Slope...	Gasous.	Fan.	13 x 8	.7	Wilson.	Steam.	4	49,390	81,000	185	372
Pan Handle,	Drift...	Gasous.	Fan.	14.5 x 4.5	.9	Brazil.	Steam.	3	70,000	70,000	112	492
Essen No. 1,	Slope...	Gasous.	Fan.	21 x 7.5	1.4	Robinson.	Steam.	3	26,300	67,000	155	462
Harrison,	Slope...	Gasous.	Fan.	21 x 3.5	1.2	Vulcan.	Steam.	3	53,250	56,000	158	443
Lake Superior,	Slope...	Gasous.	Fan.	12 x 5.5	.8	Capell.	Steam.	4	32,300	56,000	158	354
O. I. Co.,	Drift...	Non-gas.	Fan.	12 x 5.5	.8	Capell.	Steam.	4	35,000	56,000	158	354
Essen No. 2,	Slope...	Gasous.	Fan.	18 x 4.9	.75	Robinson.	Steam.	3	36,300	47,000	194	393
Essen No. 3,	Slope...	Gasous.	Fan.	10 x 6	1.75	Capell.	Steam.	3	38,000	47,000	201	223
Federal No. 2,	Drift...	Non-gas.	2 furnaces.	10 x 6	1.75	Capell.	Steam.	3	38,000	47,000	182	617
Dickson,	Drift...	Non-gas.	Fan.	10 x 4.4	1.4	Capell.	Steam.	3	38,000	47,000	182	617
Marguerite,	Drift...	Non-gas.	2 Clark fans.	6	1.4	Capell.	Steam.	3	42,700	76,000	169	449
Pardner,	Drift...	Non-gas.	Fan.	18 x 7.5	1	Clark.	Electric.	3	33,800	68,000	203	224
Hartley and Marshall,	Drift...	Non-gas.	Fan.	25 x 6.5	1.2	Brazil.	Steam.	5	27,000	41,500	248	190
Fair Haven,	Drift...	Gasous.	Furnace.	25 x 7.5	1.2	Vulcan.	Steam.	5	45,780	82,000	229	372
Lick Run,	Slope...	Gasous.	Fan.	25 x 7.5	...	Vulcan.	Steam.	48	37,000	40,000	191	209
New York and Cleveland Gas Coal Co.	Drift...	Non-gas.	Furnace.	25 x 7.5	...	Vulcan.	Steam.	1	30,000	71,000	132	537
Oak Hill No. 3.	Drift...	Non-gas.	Furnace.	...	...	...	...	...	...	...	...	...
Oak Hill No. 4.	Drift...	Non-gas.	Furnace.	...	...	...	...	...	...	...	...	...
Oak Hill No. 5.	Drift...	Non-gas.	Furnace.	...	...	...	...	...	...	...	...	...
Duquesne,	Drift...	Non-gas.	Furnace.	...	...	...	...	...	...	...	...	...
Monongahela River C. C. & C. Co.	Drift...	Non-gas.	3 furnaces.	12 x 4	...	Pallock.	Steam.	112	39,600	65,000	189	344
Beck's Run,	Drift...	Gasous.	Fan.	12 x 4	...	Pallock.	Steam.	112	19,000	52,000	122	426
Walton,	Drift...	Non-gas.	Furnace.	...	...	...	...	...	42,500	52,000	202	275
Six Mile Ferry,	Drift...	Non-gas.	Furnace.	...	...	...	...	...	...	...	...	...
Midland Coal Co.	Drift...	Non-gas.	Fan.	11 x 4.4	.7	Capell.	Steam.	5	60,000	73,000	310	235
Midland No. 1,	Drift...	Non-gas.	Fan.	11 x 4.4	.6	Capell.	Steam.	2	31,000	38,000	170	230
Midland No. 2,	Drift...	Non-gas.	Fan.	11 x 4.4	.6	Capell.	Steam.	2	31,000	38,000	165	230
Midland No. 3,	Drift...	Non-gas.	Fan.	9 x 6	...	Capell.	Steam.	3	27,800	67,000	175	383
Carnegie,	Drift...	Non-gas.	Fan.	...	...	...	...	...	...	...	...	...
Primrose,*	Drift...	Non-gas.	Fan.	12 x 4.8	.4	Brazil.	Steam.	3	22,500	45,000	135	338
Witch Hazel Coal Co.	Slope...	Gasous.	Fan.	12 x 4.8	.4	Brazil.	Steam.	3	22,500	45,000	135	338
Beadling,	Slope...	Gasous.	Fan.	12 x 4.8	.4	Brazil.	Steam.	3	22,500	45,000	135	338
Florence,*	Slope...	Gasous.	Fan.	12 x 4.8	.4	Brazil.	Steam.	3	22,500	45,000	135	338
Mansfield Coal and Coke Co.	Drift...	Gasous.	2 fans.	5 x 3	1.2	Capell.	Electric.	5	67,500	117,000	375	312
Mansfield No. 2,	Drift...	Gasous.	2 fans.	18 x 9	1.1	Wilson.	Steam.	5	67,500	117,000	375	312
Pittsburg and Buffalo Co.	Slope...	Gasous.	Fan.	13.5 x 5	...	Capell.	Steam.	6	84,600	117,400	500	224
Hazel,	Slope...	Gasous.	Fan.	13.5 x 5	...	Capell.	Steam.	6	84,600	117,400	500	224
Meadow Lands Coal Co.	Slope...	Non-gas.	Fan.	16 x 4.5	...	Brazil.	Steam.	3	22,000	42,000	140	288
Meadow Lands,	Slope...	Non-gas.	Fan.	16 x 4.5	...	Brazil.	Steam.	3	22,000	42,000	140	288

*Under construction.

TABLE I—Continued.

Names of Operators and Mines.	Kind of opening.	Gaseous or non-gaseous.	Method of ventilation.	Diameter and width of fan in feet.	Water gauge developed—in inches.	Name of fan.	Power used.	Area of furnace bars in square feet.	Number of air splits of air currents.	Number of cubic feet of air per minute entering the mine at inlet.	Total quantity of air per minute circulating in all the splits in cubic feet.	Number of cubic feet per minute passing out at out- let.	Number of persons employed inside.	Average number of cubic feet per minute provided for each person.
United Coal Co. Rich Hill,	Slope, ..	Non-gas.	Furnace, ..	.....	.....	.....	.....	20	1	.....	10,000	14,000	90	135
John M. Greek. Sallie,	Slope, ..	Non-gas.	Furnace, ..	.....	.....	.....	.....	16	.....	.....	.....	.....	43	.....
Amyville-Youghiogheny Gas Coal Co. Katie,	Slope, ..	Non-gas.	Fan,	12 x 4.5	.....	Brazil,	Steam, ..	.....	1	.....	27,000	45,000	77	584
Pan Handle Mining Co. Blyth,	Slope, ..	Gaseous.	Fan,	16 x 4.2	.....	Brazil,	Steam, ..	.....	2	37,000	28,200	37,800	114	331
National Mining Co. National No. 1,	Slope, ..	Gaseous.	Fan,	16 x 6	.....	Capell,	Steam, ..	.....	1	.....	16,800	23,000	73	315
Mankedick Coal Co. Pine Ridge,	Drift, ..	Non-gas.	Furnace, ..	.....	.....	.....	.....	36	2	.....	13,600	19,400	89	218
E. W. Hanford. Chalfant,	Drift, ..	Non-gas.	Fan,	12 x 4.5	.....	Capell,	Steam, ..	.....	1	.....	7,000	7,000	89	78
Vernor Coal and Coke Co. Verner,	Slope, ..	Gaseous.	Fan,	10 x 4.4	.....	Capell,	Steam, ..	.....	2	.....	24,000	30,000	119	252
Bulger Block Coal Co. Bulger,	Shaft, ..	Gaseous.	Fan,	10 x 4.4	.....	Capell,	Steam, ..	.....	3	.....	37,300	40,000	172	232
Chartiers Coal and Coke Co. Chartiers,	Drift, ..	Non-gas.	Fan,	12 x 3.5	.6	Brazil,	Steam, ..	.....	1	.....	28,000	28,000	59	474

P. F. Hormel. Beachmont,	Drift, ..	Non-gas.	Furnace, .....	.....	.....	.....	.....	12	1	.....	4,000	6,000	28	214
Thomas Fox Estate. Fox,	Drift, ..	Non-gas.	Fan, .....	.....	10 x 4	.3	Irwin, .....	.....	1	.....	7,000	12,000	22	545
Pittsburg and Castle Shannon Railroad Co. Castle Shannon,	Drift, ..	Non-gas.	Furnace, .....	.....	.....	.....	.....	42	2	.....	16,000	30,000	128	234
W. S. B. Hays. Calhoun,	Drift, ..	Non-gas.	Furnace, .....	.....	.....	.....	.....	24	1	.....	5,000	5,000	9	555
Weinman Brothers. Weinman,	Drift, ..	Non-gas.	Furnace, .....	.....	.....	.....	.....	24	1	.....	4,000	4,000	23	174
G. Vogeles. Ocean,	Drift, ..	Non-gas.	Furnace, .....	.....	.....	.....	.....	16	1	.....	5,000	5,000	12	416
Patterson & Robbins. Reilly,	Drift, ..	Non-gas.	Fan, .....	.....	6	.....	Clark, .....	.....	1	40,000	40,000	40,000	70	571
Kramer & Foulz. Bellwood,	Drift, ..	Non-gas.	Furnace, .....	.....	.....	.....	.....	48	1	10,000	10,000	10,000	19	536
Pittsburg Terminal Railroad and Coal Co. Pittsburg Terminal No. 1.* Pittsburg Terminal No. 2. Pittsburg Terminal No. 3. Pittsburg Terminal No. 6.	Slope, .. Shaft, .. Shaft, .. Shaft, ..	Gaseous, Gaseous, Gaseous, Gaseous,	..... ..... ..... .....	..... ..... ..... .....	..... ..... ..... .....	..... ..... ..... .....	..... ..... ..... .....	..... ..... ..... .....	..... ..... ..... .....	..... ..... ..... .....	..... ..... ..... .....	..... ..... ..... .....	..... ..... ..... .....	..... ..... ..... .....

*Under construction.

J. Names of mines using coal cutting machines, names of machines, power used, geological and local names of seams, thickest and thinnest seams where machines are used, and the approximate number of tons produced by machines during 1902.

Name and Number of Machines in Use.	Name and Number of Machines in Use.					Total machines used.	Power used by machines.	Geological and local name of seam.	Average thickness in inches.	Approximate number of tons produced by machines.
	Ingersoll.	Sullivan.	Harrison.	Jeffrey.	Morgan-Gardner.						Link Belt.
Kind of opening.	Gasous or both gasous.					Total machines used.	Power used by machines.	Geological and local name of seam.	Average thickness in inches.	Approximate number of tons produced by machines.
	Ingersoll.	Sullivan.	Harrison.	Jeffrey.	Morgan-Gardner.						Link Belt.
Moon Run.	Non-gas.	17				7	24	Pittsburg seam.	64	397,267
First Pond No. 1.	Gasous.	6	12	5			23	Pittsburg seam.	64	395,418
First Pond No. 2.	Gasous.	1	16	1			18	Pittsburg seam.	64	141,641
First Jumbo.	Gasous.	1	12	14			28	Pittsburg seam.	64	94,069
Brier Hill.	Gasous.	12	4				16	Pittsburg seam.	64	173,535
Laurel Hill No. 1.	Gasous.				11		11	Pittsburg seam.	64	17,394
Shaw No. 1.	Non-gas.		1				10	Pittsburg seam.	64	54,015
Nickel Plate.	Non-gas.		16				16	Pittsburg seam.	64	21,900
Laurel Hill No. 2.	Gasous.		13				15	Pittsburg seam.	64	133,894
Champion.	Non-gas.	3	18				21	Pittsburg seam.	64	40,751
National.	Gasous.	1	4				5	Pittsburg seam.	64	52,932
Cherry.	Non-gas.		3				3	Pittsburg seam.	64	70,564
Boyd.	Gasous.		4				4	Pittsburg seam.	64	88,213
Fort Pitt.	Non-gas.		4				4	Pittsburg seam.	64	149,101
Grant.	Gasous.			4			3	Pittsburg seam.	64	75,359
Nixon.	Non-gas.			6			3	Pittsburg seam.	64	77,957
Leasdale.	Gasous.			6			6	Pittsburg seam.	64	90,801
Summer Hill.	Gasous.			2			3	Pittsburg seam.	64	167,701
Boxer Hill.	Gasous.			7			8	Pittsburg seam.	64	60,616
Bridgeville.	Gasous.			5			5	Pittsburg seam.	64	1,756
Boon.	Gasous.			5			5	Pittsburg seam.	64	89,216
Milison.	Non-gas.		10				17	Pittsburg seam.	64	106,510
Morgan.	Gasous.		4	3			7	Pittsburg seam.	64	120,109
Volcan.	Gasous.		6	6			12	Pittsburg seam.	64	17,352
Laurel Hill No. 3.	Gasous.	6		6			12	Pittsburg seam.	64	75,166
Goodman.	Gasous.		1	17			18	Pittsburg seam.	64	78,009
Ridgeway.	Gasous.	11	1	9			21	Pittsburg seam.	64	
Pan Handle.	Drift.	8	1				9	Pittsburg seam.	64	
Sassen No. 1.	Drift.			3			3	Pittsburg seam.	64	

Remarks on Accidents.

The number of fatal accidents was forty, an increase of five over that of 1901. The number of non-fatal injuries was 134, an increase of sixty-one over the previous year, but I have reason to believe that many of the non-fatal injuries were very slight, and probably should not have been included in this report. There are several reasons why the accidents are more numerous than they were a number of years past. Nearly all of the mines are now equipped with mining machines, the introduction of which (especially that of the electric type), has undoubtedly increased the dangers of mining, and more particularly so in this and adjoining districts where the stratum of slate immediately above the coal is of such a treacherous nature. Also a majority of the persons directly employed in mining the coal were not skilled miners, consequently they are not familiar with the dangers attending the mining of coal or the use of the necessary precautions for self protection.

While it is true that most of the accidents could have been prevented if the victims themselves had used proper precautions, still it would be hardly proper to say that they were all due to carelessness, for sometimes an investigation of the cause of accidents leads to the conclusion that the victims' knowledge of coal mining with its attendant dangers was such that they did not realize the fact that they were working in danger, whereas a skilful miner, trained to his calling, could have detected the danger and have used the proper safeguards for protection. The mines cannot be closed against this class of labor referred to, for they have to be depended very largely upon for the coal production, and the only way that I can see by which accidents can be prevented under such circumstances, is by determined vigilance on the part of the mine officials. There was no single accident that caused more than one death at the same time during the year.

The approximate production of machine mined coal was 5,804,866 tons and the number of machine miners killed or fatally injured while actually engaged in the mining of coal in the working places, was 25; a production of 232,194 tons per each life lost. The approximate production of pick mined coal was 3,718,734 tons, and the number of pick miners killed or fatally injured while actually engaged in the mining of coal in the working places was 6, a production of 619,789 tons per each life lost. There were 60 machine miners non-fatally injured while directly engaged in the mining of coal, or a production of 96,748 tons per each person injured. By pick mining there were 24 non-fatal injuries and the production of pick mined coal was 154,947 tons per each person injured while directly engaged in the mining of coal.

This shows that the deaths and non-fatal injuries by machine mining during the year were far in excess of those of pick mining, notwithstanding the fact that in mines where machines are used, most of the pick mined coal is produced from pillar workings and other places where the roof conditions are too dangerous to admit of the use of machines, but it may be stated that the best and most careful men are usually employed as pick miners.

General Condition of Mines by Groups.

Operations on the Monongahela River, on the Wheeling Division of the Baltimore and Ohio Railroad, and on the West End Railroad:

There are thirteen mines in this division of the district, all of which were in operation. The Streets Run mine was worked out and abandoned during the early part of the year, and the Bellwood mine in the near future will not employ the required number of persons to come under the provisions of the law. The Reilly mine is a new operation, located on the B. & O R. R., near Willock Station, which began to ship coal during the month of November. The mine is equipped with electric mining machinery of the Jeffrey type. The ventilation is produced by a Clark fan. The inside workings are being rapidly developed, and the operators will be in a position to obtain a fairly large output during the coming year. I may state that the sanitary condition of all the mines in this part of the district is satisfactory.

Mines Located Along the Main Line of the P. C. C. & St. L. R. R.

There are nineteen mines located on and adjacent to the above railroad, three of which have been opened during the present year. Two of these, namely, Idlewood and Primrose, are old abandoned mines, the old passageways are being cleaned up and repaired for use as main haulage roads in the development of the coal territory adjacent thereto.

Chalfant mine is the other new operation which commenced to ship coal in September. The outside equipments are about all complete and the mine will likely be a large producer in the near future. A mining machine plant has been installed, the machines are of the Punching type operated by compressed air. A new fan of the Capell type has been provided to produce ventilation at the Verner mine. The conditions of most of the mines in this section of the district relative to healthfulness and safety are favorable, but there are two or three where the ventilation in parts of the workings was not satisfactory when last inspected; in each case the officials were notified of the defects and requested to make improvements.

Mines on the Chartiers Valley and B. & M, Branches of the P. C. C.
and St. L. R. R.

There are now twenty-five mines in active operation in this part of the district, three of which were opened during the year. The Slope mine was abandoned the beginning of the year. Enterprise and Provident mines are also abandoned for the time being, but neither of the above mines are exhausted, there being large available coal fields adjacent to them.

Ventilating fans of the Capell type have been installed at Midland mines Nos. 2 and 3, and a Brazil fan has been provided at the Katie mine. All of the mines, except two, in this division of the district are equipped with good ventilating fans, which provide ample means for ventilation if properly utilized. With one or two exceptions the sanitary condition of each mine was found satisfactory when last inspected. The three new openings are National No. 1, Sallie and Florence. The former is a slope opening and is equipped with electric mining machines of the Jeffrey type. A sixteen foot Capell fan is used to produce ventilation; all the latest improvements are being utilized in the development of the property, and the mine is destined to become a large producer. The company owns a large valuable coal field, and intends opening several other mines in the near future.

The Moon Run, Dickson, Margerum and Partridge mines are located on the Moon Run and Montour railroads. When last inspected, Moon Run was in good condition. Dickson was not so good, the ventilation being slack in one section of the workings, which are located a long distance from the fan, and may require additional airways or other means to produce a sufficient supply of air. The workings are under a very shallow cover, and the strata breaks to the surface which sometimes adds to the difficulty of conducting the air-currents to the face of workings, and also allows large volumes of surface water to flow into the mine, making it very difficult to keep the workings properly drained during rainy seasons. Two small Clark fans are now used to ventilate the Margerum mine, which produce sufficient air at the present time if properly cared for. In the matter of drainage the same difficulties prevail as at Dickson mine. A eighteen foot Brazil fan has been installed at the Partridge mine, but it has not given very satisfactory results so far, but should do better after the airways are improved. The drainage conditions are the same as mentioned above.

P. C. and Y. R. R.

There are eleven mines located in this part of the district, all of which are in active operation. The Beachmount mine when last

inspected was not in good condition, the ventilation and drainage being very unsatisfactory. Action was taken against the operator of this mine about one year ago, but the case is still pending in court.

At Federal No. 2 mine a new ventilating furnace has been erected in No. 2 section of workings, which has ample power to produce sufficient air if properly attended to.

A twelve foot Brazil fan has been provided at the Chartiers mine. The coal acreage to be mined from this opening is limited, so that this fan will produce ample ventilation to exhaust the territory. The mine was in good condition when last inspected. The condition of all the other mines in this division of the district was satisfactory at the time of last inspection.

There are six mines located in the vicinity of Wilkinsburg and Turtle Creek on the P. R. R. When last inspected they were all reported in fairly good condition, except the Duquesne mine, where the ventilation was inadequate, but I am informed that the air volume has since been increased to legal and sanitary requirements. One new mine, Oak Hill No. 3, has been opened in this section during the past year.

The workings are at present ventilated by a small furnace, but a Capell fan is being constructed to supplant the furnace. This mine will become a large producer in the near future. Oak Hill No. 4 will be exhausted in a few months. The territory of Oak Hill No. 5 mine is also being rapidly worked out.

Pittsburg Terminal Railroad.

This is a new coal territory located at Castle Shannon, Allegheny county, only a few miles from the city of Pittsburg. It is operated by the Pittsburg Terminal Railroad and Coal Company, which owns a large and valuable tract of the Pittsburg coal bed in this vicinity. It is the intention of the company to open eight or ten mines upon the property, all of which will be large producers, and a large tonnage will be shipped from this territory in the near future. The following is a brief description of the property, with present and prospective developments, by Mr. Austin King, General Manager.

"The coal field extends from Fair Haven on Big Saw Mill Run on the north, to Peter Creek and Library on the south, and contains about 13,600 acres of the best coal of the Pittsburg coal field.

"The company is now operating three shafts and one drift mine; another shaft is down to the coal, and at the fifth, sinking has just commenced.

The coal lies mostly in the Ninevah Synclinal, and the shafts are close to the bottom of it. The shafts vary in depth from 100 feet to

200 feet. Three other shafts are to be put down at suitable points in the field lying south of Castle Shannon and extending to Library.

"These mines are to be equipped with the most approved hoisting and mining machinery. In the drift mines electric chain mining machines will be used, and compressed air mining machines will be used in the shaft mines. Steel tripplers, gravity hoists and electric lighting and haulage will be used. Hoisting engines will be of first motion type, and cages will be of steel and of the latest pattern.

"The mechanical department will be equipped with best make of compressors, electric engines, generators and motors necessary for an output of 1,600 tons per day per mine.

"The fans and fan engines are of the most approved type with ample power to circulate double the quantity of air usually required, if found necessary. Mine tracks will be of forty and twenty pound T rail and gauge 44".

"All mine pumps are of first class make and range from 100,000 to 1,000,000 gallons per day capacity.

"Three hundred and seventy dwelling houses are contracted for, and of these 170 are built and two hundred now being built. With the exception of twenty single three-room houses, they are all commodious houses with rooms ranging from four to six in number."

TABLE I—Continued.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Partridge,	Allegheny,	G. W. Schluederberg,	Pittsburg,	Wm. C. Murray,	Imperial,	Montours R. R.
Hartley & Marshall,	Allegheny,	G. W. Schluederberg,	Pittsburg,	W. E. Leahy,	Pittsburg,	West End R. R.
Fair Haven,	Allegheny,	G. W. Schluederberg,	Pittsburg,	P. J. Keeling,	Pittsburg,	P. V. & C. R. R.
Lick Run,	Allegheny,	G. W. Schluederberg,	Pittsburg,	James Porter,	Broughton,	B. & O.
New York and Cleveland Gas Coal Co.,	Allegheny, .....	.....	.....	W. F. Craik,	Turtle Creek,	P. R. R.
Oak Hill Nos. 3 and 4,	Allegheny, .....	.....	.....	Hugh Dunning,	Unity,	P. R. R.
Oak Hill No. 2,	Allegheny, .....	.....	.....	R. Green,	Edgewood Park, ..	P. R. R.
Duquesne,	Allegheny, .....	.....	.....	.....	.....	.....
Monongahela River C. C. & C. Co.,	Allegheny,	O. A. Blackburn,	Pittsburg,	R. M. Thomas,	Camden,	River.
Beeks Run,	Allegheny,	O. A. Blackburn,	Pittsburg,	John M. Karp,	Rehman Mills,	River.
Walton,	Allegheny,	O. A. Blackburn,	Pittsburg,	Wm. Fillebrown,	Hope Church, .....	.....
Six Mile Ferry,	Allegheny, .....	.....	.....	.....	.....	.....
Midland Coal Co.,	Washington,	A. C. Munhall,	Pittsburg,	W. B. Gates,	Houston,	P. C. C. & St. L.
Midland No. 1,	Washington,	A. C. Munhall,	Pittsburg,	W. B. Gates,	Houston,	P. C. C. & St. L.
Midland No. 2,	Washington,	A. C. Munhall,	Pittsburg,	W. B. Gates,	Houston,	P. C. C. & St. L.
Midland No. 3,	Washington, .....	.....	.....	.....	.....	.....
Mansfield C. & C. Co.,	Allegheny,	Daniel Boden,	Carnegie,	Daniel Boden,	Carnegie,	P. C. C. & St. L.
Mansfield No. 2,	Allegheny, .....	.....	.....	.....	.....	.....
Pittsburg and Buffalo Co.,	Washington,	Harry P. Jones,	Canonsburg,	W. J. Holsing,	Canonsburg,	P. C. C. & St. L.
Hazel,	Washington, .....	.....	.....	.....	.....	.....
Meadow Lands Coal Co.,	Washington,	W. L. Dixon,	Schmidt Building,	Alex. McLean,	Meadow Lands,	P. C. C. & St. L.
.....	Washington, .....	.....	Pittsburg, .....	.....	.....	.....
United Coal Co.,	Washington,	W. L. Coulter, .....	.....	A. C. Latimer,	Meadow Lands,	P. C. C. & St. L.
Rich Hill,	Washington, .....	.....	.....	.....	.....	.....
John M. Groek,	Washington, .....	.....	.....	C. P. McGregor,	R. D. 5 Washing- ton, Pa.,	P. C. C. & St. L.
Salle,	Washington, .....	.....	.....	.....	.....	.....
Anyville-Youghiogheny Gas Coal Co.,	Allegheny, .....	.....	.....	Peter Watkinson,	Bridgeville,	P. C. C. & St. L.
Katie,	Allegheny, .....	.....	.....	.....	.....	.....
Pan Handle Mining Co.,	Allegheny, .....	.....	.....	.....	.....	.....
Blyth,	Allegheny, .....	.....	.....	John Blyth,	Pittsburg,	P. C. C. & St. L.

National Mining Co. National No. 1.	Allegheny.	F. A. McDonald.	Pittsburg.	W. L. McDonald.	Carnegie.	P. C. C. & St. L.
Carnegie Coal Co. Carnegie. Primrose.	Allegheny. Washington.	R. P. Borgan. R. P. Borgan.	Carnegie. Carnegie.			P. C. C. & St. L. P. C. C. & St. L.
Mankedick Coal Co. Pine Ridge. E. W. Hanford. Chalfant.	Allegheny. Allegheny.	E. H. Mankedick. E. W. Hanford.	Greggs. Pittsburg.	E. H. Mankedick. Andrew G. Hunt.	Greggs. Nobletown.	P. C. C. & St. L. P. C. C. & St. L.
Verner Coal and Coke Co. Verner.	Washington.	Thomas Beadling.	Carnegie.	Thomas Gray.	Carnegie.	P. C. C. & St. L.
Bulger Block Coal Co. Bulger.	Washington.	D. J. Kennedy.	150 Frankstown av. Pittsburg.	J. M. Sloan.	Bulger.	P. C. C. & St. L.
Chartiers Coal and Coke Co. Chartiers.	Allegheny.	J. Stonerwad.	Carnegie.			P. C. C. & St. L.
Witch Hazel Coal Co. Reading (Witch Hazel). Florence.	Allegheny. Washington.	David Jacob. David Jacob.	Beadling. Beadling.			P. C. & Y. P. C. C. & St. L.
P. F. Hornel. Beachmount.	Allegheny.			P. F. Hornel.	Hickman.	P. C. & Y.
Thomas Fox Estate. Fox.	Allegheny.	James T. Fox.	West End. Pbg.	James T. Fox.	W. E. Pittsburg.	
Pittsburg & C. S. R. R. Co. Castle Shannon.	Allegheny.	G. W. Schluenderberg.	Pittsburg.	E. J. Reamer.	Carson st. Pbg.	P. & C. S. R. R.
W. S. B. Hays. Calhoun.	Allegheny.	L. O. Hays.	Homestead.	L. O. Hays.	Homestead.	
Weinman Bros. Weinman.	Allegheny.	Jacob Weinman.	Station D. Pbg.	Jacob Weinman.	Station D. Pbg.	
G. Vogele. Ocean.	Allegheny.	G. Vogele.	Wilksburg.	G. Vogele.	Wilksburg.	
Patterson & Robbins. Reddy.	Allegheny.	A. M. Osborne.	Cleveland, Ohio.	John Reese.	Hazelwood, Pa.	B. & O.
Pbg. Term. R. R. & C. Co. Pittsburg Terminal No. 1. Pittsburg Terminal No. 2. Pittsburg Terminal No. 3. Pittsburg Terminal No. 4. Pittsburg Terminal No. 5. Pittsburg Terminal No. 6.	Allegheny. Allegheny. Allegheny. Allegheny. Allegheny. Allegheny.	Austin King. Austin King. Austin King. Austin King. Austin King.	Castle Shannon. Castle Shannon. Castle Shannon. Castle Shannon. Castle Shannon.	W. I. Dolan. W. I. Dolan. F. E. King. S. H. Blair.	Castle Shannon. Castle Shannon. Castle Shannon. Broughton.	P. T. R. R. P. T. R. R. P. T. R. R. P. T. R. R. P. T. R. R.
Kramer and Fultz. Redwood.	Allegheny.	G. W. Kramer.	Homestead.			

TABLE II.—Gives the total number of tons of coal mined and tons of coke produced in each colliery, number of days worked, number of employees, number of employees killed and injured, number of kegs of powder, etc., used in the Seventh Bituminous District for the year ending December 31, 1902.

Name of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employes—tons.	Total production of coal in tons.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Pittsburg Coal Co.												
Moore Run, No. 1.	Allegheny.	405,637	7,156	1,766	244,518	271.5	510	1	3	7,610	470	22
First Pool, No. 1.	Allegheny.	527,453	8,410	2,231	528,584	285	314	1	4	4		24
Juniper.	Allegheny.	160,422	12,671	765	173,879	292.5	247				50	20
Beiler Hill.	Washington.	358,792	1,155	825	106,800	292.5	212		4		50	22
Laurel Hill, No. 1.	Washington.	297,578	8,592	888	117,558	217.5	259	1	7		150	18
Shaw No. 1.	Allegheny.	112,785	1,124	210	114,119	219	196			215	50	24
Nickel Plate.	Allegheny.	53,133	3,628	632	97,733	175.5	184			1,000		13
Laurel Hill, No. 2.	Washington.	24,972	1,622	401	26,756	80	126	1	4	7	30	21
Chattahoo.	Allegheny.	184,617	7,438	624	122,769	266	247			1,500	200	25
Old Forge.	Allegheny.	73,394	1,809	175	75,910	298.5	88				8	8
National.	Allegheny.	48,416	1,224	81	63,167	281	98				400	10
Deputy.	Allegheny.	98,416	1,773	48	103,167	297	101			50	100	9
Point Hill.	Allegheny.	64,417	1,872	426	105,235	187	171	1	1	50		10
Gravel.	Allegheny.	89,485	795	98	87,231	199.5	165			175		9
Elmwood.	Allegheny.	89,895	1,292	447	91,744	199.5	141			175		12
Nixon.	Allegheny.	183,967	136	76	213	213	25			50		9
Leaseths.	Allegheny.	96,145	494	601	184,234	290.5	256	3	2			15
Susquehanna Hill.	Allegheny.	89,175	214	289	90,629	297.5	119					10
Power Hill.	Allegheny.	101,750	3,798	165	94,688	122	296	1	5			14
Briggsville.	Allegheny.	182,294	1,436	410	173,626	184.5	139			550		9
Buck.	Allegheny.	81,757	2,947	1,771	187,412	297.5	226				50	17
Allison.	Washington.	166,149	1,111	296	82,344	194	194		1	951		17
Monarch.	Allegheny.	106,885	1,296	1,035	106,622	174	182					16
	Allegheny.		1,452	1,035	178,418	199	182	1	1	217		15

*Totals in this column are averages.

Vulcan,	Allegheny,	181,171	3,762	612	185,546	161	954	1	1	500	160	36
Laurel Hill No. 6,	Allegheny,	147,328	3,036	471	151,008	100.5	271			160	30	22
Greendown,	Washington,	136,368	3,992	1,375	131,705	158.5	267					14
Ridgeway,	Washington,	112,269	5,413	4,064	122,076	158.5	210					12
Run Handle,	Allegheny,	172,885	3,002	1,172	147,719	224.5	161	1		338	30	15
Essen No. 1,	Allegheny,	165,334	1,797	97	167,228	219	168			470	300	12
Hickory,	Allegheny,	162,087	3,134	1,632	167,795	212.5	178	2		470	300	12
Lake Superior,	Allegheny,	135,771	758	290	126,775	212.5	176			470	300	11
O. I. C.,	Allegheny,	90,021			90,021		164			200		10
Essen No. 2,	Allegheny,	167,887		56	168,096	215.5	178			700		15
Essen No. 3,	Allegheny,	167,887		77.8	168,096	215.5	178			700		15
Federal No. 2,	Allegheny,	167,887		77.8	168,096	215.5	178			700		15
Dickson,	Allegheny,	167,887		77.8	168,096	215.5	178			700		15
Marquette,	Allegheny,	162,945		407	163,628	203.5	189			1,000	100	20
Partisler,	Allegheny,	170,141		407	170,549	203.5	228			1,000	100	20
Hartley & Marshall,	Allegheny,	157,135		723	158,224	203.5	224	1		1,000	100	22
Four Haven,	Allegheny,	161,533		963	158,224	203.5	224			1,000	100	22
Lake Umbagog,	Allegheny,	31,161	5,013	381	169,567	281	230			1,000	100	15
Totals,	Allegheny,	31,161	1,636	900	93,607	185.5	151	2		370	100	14
		5,806,888	120,347	27,637	6,009,972	206	8,158	26	102	22,898	3,264	605
New York and Cleveland Gas Coal Co.												
Oak Hill No. 1,	Allegheny,	10,618			10,618	25.5	115					12
Oak Hill No. 2,	Allegheny,	161,733	1,819	526	164,118	203.5	173	2				18
Oak Hill No. 3,	Allegheny,	428,610	310	89	429,639	202.5	378	2				19
Lumpasne,	Allegheny,	130,750	664	754	144,168	206.5	209					18
Totals,		740,781	2,393	1,369	745,443	214	805	4	5			67
Monongahela River C. C. & C. Co.												
Booke Run,	Allegheny,	511,067	2,796	875	518,688	210	392					19
Watton,	Allegheny,	160,512	1,720	360	162,991	257	144	7				17
Six Mile Ferry,	Allegheny,	69,012	219	186	69,517	81	234					19
Totals,		440,591	5,565	1,420	449,586	195.6	660					55
Midland Coal Co.												
Midland No. 1,	Washington,	253,463	3,696	400	257,603	207.5	345	1	4			20
Midland No. 2,	Washington,	62,623			62,623	129.5	191					32
Midland No. 3,	Washington,	79,679	3,406	260	83,229	126.5	194					24
Totals,		394,755	7,000	660	403,255	165.5	729	1	7			76
Carnegie												
Primrose,	Allegheny,	175,309	1,420		177,209	208	107	1	3			15
Totals,	Washington,	175,309	1,420		177,209	208	288	1	3			15

*Totals in this column are averages. New values under construction.

TABLE II—Continued.

Name of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Witch Hazel Coal Co.												
Beading,	Allegheny,	104,177	1,500	.....	105,677	179	143	1	1	.....	.....	9
*Florence,	Washington, .....	.....	.....	.....	.....	90	20	.....	.....	.....	.....	.....
Totals, .....	.....	104,177	1,500	.....	105,677	139	163	1	1	.....	.....	9
Pittsburg Terminal Railroad and Coal Co.												
Pittsburg Terminal No. 1,	Allegheny,	4,000	.....	.....	4,000	153	109	.....	.....	.....	1,400	4
Pittsburg Terminal No. 2,	Allegheny,	1,000	.....	.....	1,000	101	28	1	.....	.....	800	2
Pittsburg Terminal No. 3,	Allegheny,	650	.....	.....	*650	40	52	.....	.....	.....	500	.....
Pittsburg Terminal No. 6,	Allegheny,	500	.....	.....	*500	25	45	.....	.....	.....	.....	.....
Totals, .....	.....	6,150	.....	.....	6,150	79.7	232	1	.....	.....	2,700	6

*Totals in this column are averages. *New mines under construction.

Recapitulation.

Pittsburg Coal Co.,	Alle'y & Wash.,	5,869,898	120,547	27,637	6,009,082	206	8,158	26	102	22,998	2,364	865
New York and Cleveland Gas Coal Co.,	Allegheny,	740,781	3,293	1,396	745,543	214	865	4	5	.....	.....	78
Monongahela River C. & C. Co.,	Allegheny,	443,501	5,585	1,459	450,538	195.6	600	.....	1	.....	.....	58
Midland Coal Co.,	Washington,	294,501	7,000	.....	402,235	165.5	730	.....	1	.....	.....	76
Carnegie Coal Co.,	Alle'y & Wash.,	175,309	1,920	.....	177,299	288	298	1	3	.....	.....	15
Witch Hazel Coal Co.,	Alle'y & Wash.,	104,177	1,500	.....	105,677	139	163	1	1	.....	.....	9
Pittsburg Terminal Railroad and Coal Co.,	Allegheny,	6,150	.....	.....	6,150	79.7	232	1	.....	.....	2,700	6
Mansfield Coal and Coke Co.,	Allegheny,	430,763	3,500	1,393	435,556	279.5	414	.....	3	.....	.....	30
Pittsburg and Buffalo Co.,	Washington,	332,870	2,500	2,500	357,870	217	551	1	.....	3,240	380	22

Meadow Lands Coal Co.,	Washington,	153,375	960	35	154,310	168.5	157	1	1	270	200	8
United Coal Co.,	Washington,	68,137	1,387	.....	69,524	150	102	1	2	.....	.....	6
John M. Greek,	Washington,	20,000	100	.....	20,100	136	55	.....	.....	5	.....	2
Amyville, Youghiogheny Gas Coal Co.,	Allegheny,	63,973	.....	.....	63,973	207.5	85	.....	.....	250	50	11
Pan Handle Mining Co.,	Allegheny,	102,568	1,030	.....	104,598	206	126	1	.....	.....	.....	8
National Mining Co.,	Allegheny,	6,810	553	69	7,832	197	119	.....	.....	6	.....	4
Mankelick Coal Co.,	Allegheny,	52,000	.....	100	52,100	227	96	1	.....	100	.....	11
E. W. Hanford,	Allegheny,	13,319	20	64	13,503	50.5	116	.....	.....	20	510	10
V. W. Coal and Coke Co.,	Washington,	25,049	100	.....	25,149	104	129	.....	1	.....	.....	5
Boyer Mfg. Coal Co.,	Washington,	3,106	1,400	.....	47,086	210	184	1	2	.....	.....	6
Chartiers Coal and Coke Co.,	Allegheny,	39,125	569	.....	40,694	180	87	.....	.....	.....	.....	2
P. F. Hornel,	Allegheny,	19,983	270	21	20,039	263	27	.....	.....	.....	.....	2
Thomas Fox Estate,	Allegheny, .....	.....	.....	13,100	13,370	270	24	.....	.....	.....	.....	2
Pittsburg and Castle Shannon R. R. Co.,	Allegheny, .....	.....	.....	84,742	84,742	275.5	138	.....	.....	.....	.....	15
W. S. B. Hays,	Allegheny, .....	.....	.....	10,146	10,146	311	11	.....	.....	.....	.....	1
Wellman Brothers,	Allegheny, .....	.....	.....	11,988	11,988	270	43	.....	.....	.....	.....	3
C. Vogele,	Allegheny, .....	.....	10	7,117	7,127	270	21	.....	.....	.....	.....	2
Patterson & Robbins,	Allegheny,	12,000	400	100	12,590	29	50	.....	.....	252	10	6
Kramer & Poutiz,	Allegheny, .....	.....	.....	14,000	14,000	307	25	.....	.....	.....	.....	3
Grand totals, .....	.....	9,183,374	153,565	186,498	9,523,637	194.5	13,569	40	124	27,531	6,124	1,016

*Totals in this column are averages.

TABLE III.—Showing the number of each class of employees at each colliery in the Seventh Bituminous District during the year 1902.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.										Grand total, inside and outside.
		Mine foremen.	Assistant mine foremen.	Fire bosses.	Miners.	Machine runners.	Machine loaders.	Machine scrapers.	Drivers and runners.	Door boys and helpers.	Company men.	All other employes.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	Coke employes.	Book-keepers and clerks.	All other employes.	Total outside.	
Pittsburg Coal Co.																						
Moore Run.	Allegheny.	1	3	...	122	29	221	22	22	3	39	4	471	1	...	16	...	...	...	45	69
First Hill No. 1.	Allegheny.	1	1	...	65	19	120	19	30	3	11	...	235	1	...	4	...	...	...	15	46
First Hill No. 2.	Allegheny.	...	...	...	45	19	105	15	15	2	16	...	215	...	...	...	...	...	...	15	31
Brum.	Washington.	...	...	...	39	17	80	17	15	2	16	...	181	...	...	...	...	...	...	12	31
Brum Hill.	Washington.	...	...	...	49	14	105	12	12	2	13	...	212	1	...	...	...	...	...	12	31
Laurel Hill No. 1.	Allegheny.	...	...	...	65	12	85	12	4	1	17	...	225	1	...	6	...	...	...	19	34
Shaw No. 1.	Washington.	...	...	...	65	11	41	4	16	1	14	...	154	1	1	...	...	...	...	31	42
Nickel Plate.	Washington.	...	...	...	58	15	40	15	12	1	14	...	164	1	...	...	...	...	...	31	42
Laurel Hill No. 2.	Washington.	...	...	...	29	10	59	16	8	...	18	...	166	1	...	...	...	...	...	19	39
Champion.	Allegheny.	...	...	...	63	29	72	26	29	...	18	...	218	...	...	...	...	...	...	8	27
Oak Ridge.	Allegheny.	...	...	...	34	6	25	6	7	...	...	...	69	1	...	...	...	...	...	12	13
Nathan.	Allegheny.	...	...	...	15	3	32	3	4	...	...	...	86	1	...	...	...	...	...	12	13
Cherry.	Allegheny.	...	...	...	15	3	32	3	4	...	...	...	86	1	...	...	...	...	...	12	13
Rocky Mt.	Allegheny.	...	...	...	15	3	32	3	4	...	...	...	86	1	...	...	...	...	...	12	13
Grand.	Allegheny.	...	...	...	8	4	84	4	12	...	...	...	120	1	...	...	...	...	...	12	13
Elkwood.	Allegheny.	...	...	...	6	...	...	...	...	...	...	...	12	1	...	...	...	...	...	12	13
Nixon.	Allegheny.	...	...	...	34	12	103	12	21	...	8	...	267	1	...	...	...	...	...	12	13
Leadville.	Allegheny.	...	...	...	23	5	45	5	13	...	...	...	105	1	...	...	...	...	...	12	13
Summer Hill.	Allegheny.	...	...	...	29	7	102	7	13	...	...	...	165	1	1	...	...	...	...	12	13
Row r Hill.	Allegheny.	...	...	...	14	6	75	6	11	...	...	...	124	1	...	...	...	...	...	12	13
Redecliffe.	Allegheny.	...	...	...	29	19	135	19	17	...	10	...	298	...	...	...	...	...	...	11	21
Roan.	Allegheny.	...	...	...	24	8	34	8	8	...	...	...	88	1	...	...	...	...	...	11	19
Alison.	Washington.	...	...	...	100	...	...	...	...	...	...	...	108	...	...	...	...	...	...	11	19
Morgan.	Allegheny.	...	...	...	25	...	96	...	11	...	...	...	137	...	...	...	...	...	...	11	19
Vulcan.	Allegheny.	...	...	...	29	12	101	12	16	...	...	...	218	...	...	...	...	...	...	11	26

TABLE III—Continued.

Names of Operators and Col- lieries.	County.	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.										Grand total, inside and outside.	
		Mine foremen.	Assistant mine foremen.	Fire bosses.	Miners.	Machine runners.	Machine loaders.	Machine scrapers.	Drivers and runners.	Door boys and helpers.	Company men.	All other employes.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	Coke employes.	Book-keepers and clerks.	All other employes.	Total outside.		
Laurel Hill No. 5.	Allegheny.	1	1	1	32	14	99	14	19	6	11	9	198	1	1	4	5	1	1	13	20	218	218
Crookmoore.	Washington.	1	1	1	54	12	69	14	12	6	10	1	183	1	1	4	5	1	1	13	24	207	207
Roadway.	Washington.	1	1	1	64	14	62	14	12	6	10	1	185	1	1	4	5	1	1	14	25	210	210
Pan Handle.	Allegheny.	1	1	1	50	9	50	9	12	1	7	1	142	1	1	3	4	1	1	10	19	161	161
Esson No. 1.	Allegheny.	1	1	1	80	3	45	3	12	1	7	1	155	1	1	3	3	1	1	6	13	168	168
Harrison.	Allegheny.	1	1	1	30	13	75	13	14	2	8	1	158	1	1	3	3	1	1	10	20	178	178
Lake Superior.	Allegheny.	1	1	1	22	8	87	8	12	4	14	1	158	1	1	3	3	1	1	10	18	176	176
O. I. Co.	Allegheny.	1	1	1	22	6	46	6	9	1	3	1	94	1	1	3	3	1	1	6	10	104	104
Esson No. 2.	Allegheny.	1	1	1	23	9	120	10	13	3	13	8	201	1	1	4	4	1	1	8	16	217	217
Esson No. 3.	Allegheny.	1	1	1	40	10	89	10	10	3	11	6	182	1	1	4	4	1	1	5	10	191	191
Federal No. 2.	Allegheny.	1	1	1	30	4	29	4	8	1	10	1	81	1	1	3	3	1	1	5	10	189	189
Brookson.	Allegheny.	1	1	1	45	8	75	8	19	2	17	1	169	1	1	3	3	1	1	5	10	228	228
Margatum.	Allegheny.	1	1	1	59	4	65	4	16	6	11	1	203	1	1	3	3	1	1	15	25	238	238
Martridge.	Allegheny.	1	1	1	79	4	90	4	15	6	8	1	208	1	1	3	3	1	1	19	26	231	231
Fair Haven.	Allegheny.	1	1	1	29	11	43	11	13	2	9	1	101	1	1	4	4	1	1	22	33	243	243
Black Run.	Allegheny.	1	1	1	26	14	42	14	14	1	4	5	132	1	1	4	4	1	1	14	19	151	151
Totals.		43	6	63	1,899	424	3,124	397	598	127	293	196	7,170	24	2	100	106	50	586	988	8,158	8,158	
New York and Cleveland Gas Coal Co.																							
Oak Hill No. 3.	Allegheny.	1	1	1	77				12	4		8	102	1	1					39	43	115	115
Oak Hill No. 4.	Allegheny.	1	1	1	154				10	5		1	157	1	1					10	16	173	173

Oak Hill No. 5,	1	1	281	.....	.....	.....	14	9	.....	9	315	1	.....	2	2	.....	1	17	23	328
Duquesne,	1	1	165	.....	.....	.....	8	7	.....	9	150	1	.....	2	4	.....	1	11	19	209
Totals,	4	1	657	.....	.....	.....	44	25	.....	33	764	4	.....	8	8	.....	4	77	101	865
Monongahela River C. C. and Coke Co. ....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Beck's Run,	1	1	70	6	70	6	16	3	.....	16	189	1	.....	4	1	.....	1	20	31	222
Walton,	1	1	100	.....	.....	.....	11	1	.....	8	122	1	.....	3	3	.....	1	14	22	144
Six Mile Ferry,	1	1	80	6	70	6	13	5	.....	20	292	1	.....	3	3	.....	1	25	32	254
Totals,	3	1	250	12	140	12	40	9	.....	44	513	3	.....	10	12	.....	3	59	87	600
Midland Coal Co. ....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Midland No. 1,	1	1	20	20	198	30	20	4	.....	6	310	1	1	4	9	.....	2	18	35	345
Midland No. 2,	1	1	9	15	107	15	16	2	.....	4	170	1	3	1	3	.....	1	16	21	191
Midland No. 3,	1	1	8	15	102	15	17	2	.....	4	165	1	3	8	.....	1	16	29	194	
Totals,	3	3	37	60	407	60	53	8	.....	14	645	1	3	10	17	.....	4	50	85	730
Carnegie Coal Co. ....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Carnegie,	1	1	30	7	105	7	13	5	.....	6	175	.....	.....	2	3	.....	2	11	18	193
Pittmore,	1	1	.....	.....	.....	.....	2	.....	.....	20	23	.....	.....	2	.....	.....	.....	10	12	35
Totals,	2	1	30	7	105	7	15	5	.....	29	198	.....	.....	4	3	.....	2	21	30	228
Witch Hazel Coal Co. ....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Reading,	1	1	12	12	72	12	11	3	.....	4	133	1	.....	2	3	.....	1	2	10	143
Florence,	1	1	10	.....	.....	.....	1	.....	.....	.....	12	.....	.....	1	1	.....	.....	6	8	20
Totals,	2	1	22	12	72	12	12	3	.....	4	145	1	.....	3	4	.....	1	9	18	163
Pittsburg Terminal Railroad and Coal Co. ....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pittsburg Terminal No. 1,	1	1	43	.....	.....	.....	6	2	.....	4	57	1	1	4	4	.....	2	40	52	109
Pittsburg Terminal No. 2,	1	1	12	.....	.....	.....	2	.....	.....	.....	14	.....	.....	4	.....	.....	10	14	28	58
Pittsburg Terminal No. 3,	1	1	25	.....	.....	.....	.....	.....	.....	2	28	1	.....	2	6	.....	15	24	52	109
Pittsburg Terminal No. 6,	1	1	26	.....	.....	.....	2	.....	.....	.....	41	1	.....	1	.....	.....	.....	2	43	43
Totals,	3	1	116	.....	.....	.....	10	2	.....	8	140	3	1	7	14	.....	2	65	92	232
Mansfield Coal and Coke Co. Mansfield No. 2, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pittsburg and Buffalo Co. Hazel,	1	1	78	13	224	13	16	1	.....	11	375	1	.....	17	3	.....	3	15	39	411
Meadow Lands Coal Co. Meadow Lands,	1	2	75	22	330	22	26	2	.....	1	500	1	1	8	4	.....	4	53	51	551
United Coal Co. Rich Hill,	1	1	20	10	80	10	10	.....	.....	4	146	1	.....	1	2	.....	1	6	11	157
Totals,	1	1	12	4	53	4	8	2	.....	.....	90	1	.....	2	2	.....	1	6	12	162

TABLE III—Continued.

Names of Operators and Col- lieries.	County.	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.										Grand total, inside and outside.
		Mine foremen.	Assistant mine foremen.	Pipe bosses.	Miners.	Machine runners.	Machine loaders.	Machine scrapers.	Drivers and runners.	Door boys and helpers.	Company men.	All other employes.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	Coke employes.	Book-keepers and clerks.	All other employes.	Total outside.	
John M. Greek.																						
Sallie,	Washington.	1	.....	.....	40	.....	.....	.....	2	.....	.....	.....	43	1	.....	2	2	.....	2	5	12	55
Anyville-Youghiogheny Gas Coal Co.																						
Katie,	Allegheny...	1	.....	.....	6	4	46	4	7	3	6	.....	77	.....	.....	2	3	.....	1	2	8	85
Pan Handle Mining Co.																						
Blyth,	Allegheny...	1	.....	1	20	5	70	5	6	2	2	2	114	1	.....	2	2	.....	.....	6	12	126
National Mining Co.																						
National No. 1,	Allegheny...	1	.....	.....	.....	3	34	3	4	.....	21	4	73	1	1	4	4	.....	1	25	46	119
Mankedick Coal Co.																						
Pine Ridge,	Allegheny...	1	.....	.....	80	.....	.....	.....	5	.....	3	.....	89	1	.....	1	.....	.....	2	2	7	96
E. W. Harford																						
Chalfant,	Allegheny...	1	.....	.....	61	1	7	1	9	1	8	.....	89	1	.....	3	2	.....	1	50	57	146
Vernor Coal and Coke Co.																						
Vernor,	Washington,	1	.....	1	10	12	70	12	7	2	2	1	119	1	.....	1	3	.....	1	4	10	129
Bulker Block Coal Co.																						
Bulker,	Washington,	1	.....	1	75	8	68	8	5	1	2	.....	172	1	.....	2	3	.....	1	5	12	184

Chartiers Coal and Coke Co. Chartiers,.....	1	1	2	2	5	1	59	1	2	5	8	67
P. F. Hornel. Beachmont,.....	1	1	25	2	2	28	1	1	1	1	2	30
Thomas Fox Estate. Fox,.....	1	1	18	1	1	22	1	1	1	2	2	24
Pittsburg and Castle Shannon Railroad Co. Castle Shannon,.....	1	1	115	4	5	128	1	1	9	10	10	133
W. S. B. Hays. Calhoun,.....	1	1	8	1	2	23	1	1	2	2	11	23
Weinman Brothers. Weinman,.....	1	1	20	1	1	12	1	1	1	7	9	21
G. Vogele. Ocean,.....	1	1	9	1	1	76	1	1	1	12	20	90
Patterson & Robbins. Reilly,.....	1	1	10	8	32	5	1	5	1	4	6	25
Kramer & Foulz. Bellwood,.....	1	1	15	2	1	19	1	1	1	4	6	25

Recapitulation.

Pittsburg Coal Co.,.....	43	6	63	1,829	424	3,124	297	598	127	293	196	7,176	24	2	160	106	59	586	988	8,158
New York and Cleveland Gas Coal Co.,.....	4	1	657	41	25	32	764	4	8	8	4	77	101	865	3	2	50	87	690	
Monongahela River Consoli- dated Coal and Coke Co.,.....	2	1	250	12	140	12	60	32	8	10	12	513	3	10	12	12	4	50	85	730
Midland Coal Co.,.....	2	3	37	60	407	60	7	15	5	11	11	615	1	3	10	17	4	21	30	228
Campbell Coal Co.,.....	2	2	1	30	7	165	7	15	5	29	6	198	1	3	4	3	1	5	18	163
Webb Hazel Coal Co.,.....	2	2	1	22	12	72	12	12	3	4	5	145	1	1	3	4	1	5	18	163
Pittsburg Terminal Railroad and Coal Co.,.....	3	1	116	10	2	8	140	3	1	17	14	340	3	1	1	11	2	65	92	292
Manassah Coal and Coke Co.,.....	1	1	178	13	394	13	14	10	2	15	2	375	1	1	15	2	15	39	411	
Washington and Potomac Rivers Coal Co.,.....	1	2	75	22	225	22	25	2	2	8	1	294	1	1	8	1	4	33	53	551
United Coal Co.,.....	1	1	29	14	80	14	10	10	2	4	4	168	1	1	1	3	1	6	11	157
John M. Crook,.....	1	1	13	4	53	4	8	2	2	6	1	90	1	1	3	3	1	6	12	102
Ameyville - Younghigheney Gas Coal Co.,.....	1	1	40	4	2	43	1	1	1	1	1	43	1	1	1	1	2	5	12	53
Pan Handle Mining Co.,.....	1	1	6	4	46	4	4	4	1	6	1	77	1	1	1	1	1	2	8	57
National Mining Co.,.....	1	1	26	5	70	5	70	5	2	3	2	114	1	1	1	1	1	6	12	136
Allegany,.....	1	1	3	3	31	3	3	4	4	24	4	73	1	1	4	4	1	23	46	119

TABLE III—Continued.

Names of Operators and Col- lieries.	County.	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.										Grand total, inside and outside.
		Mine foremen.	Assistant mine foremen.	Fire bosses.	Miners.	Machine runners.	Machine loaders.	Machine scrapers.	Drivers and runners.	Door boys and helpers.	Company men.	All other employes.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	Coke employes.	Book-keepers and clerks.	All other employes.	Total outside.	
Mackellack Coal Co.,	Allegheny	1	1	1	80	1	7	1	5	1	3	89	1	1	1	1	1	1	1	3	7	96
E. W. Hanford,	Allegheny	1	1	1	81	1	7	1	5	1	3	93	1	1	1	1	1	1	1	50	57	146
Berner Coal and Coke Co.,	Washington	1	1	1	15	12	70	12	2	2	1	119	1	1	1	1	1	1	1	4	10	129
Baughman Coal Co.,	Washington	1	1	1	75	18	68	1	3	1	3	172	1	1	1	1	1	1	1	4	12	184
Charles Coal and Coke Co.,	Allegheny	1	1	1	21	2	27	2	1	1	1	55	1	1	1	1	1	1	1	5	13	67
P. F. Hornel,	Allegheny	1	1	1	25	1	1	1	1	1	1	28	1	1	1	1	1	1	1	5	20	24
Thomas Fox Estate,	Allegheny	1	1	1	18	1	1	1	1	1	1	22	1	1	1	1	1	1	1	3	24	24
Pittsburg and Castle Shannon Railroad Co.,	Allegheny	1	1	1	115	1	1	1	8	1	4	128	1	1	1	1	1	1	1	9	10	138
W. S. B. Hays,	Allegheny	1	1	1	8	1	1	1	1	1	1	23	1	1	1	1	1	1	1	1	2	11
Weidman Brothers,	Allegheny	1	1	1	20	1	1	1	1	1	1	23	1	1	1	1	1	1	1	7	23	23
G. Vogel,	Allegheny	1	1	1	9	1	1	1	1	1	1	12	1	1	1	1	1	1	1	1	9	21
Patterson & Robbins,	Allegheny	1	1	1	10	8	32	8	3	1	5	70	1	1	1	3	3	1	1	12	20	90
Kramer & Foulz,	Allegheny	1	1	1	15	1	1	1	3	1	1	19	1	1	1	1	1	1	4	6	25	25
Grand totals,		98	16	78	2,739	607	4,889	580	898	195	408	342	11,832	51	10	252	262	87	1,075	1,737	13,569	

TABLE III—Continued.

Names of Operators and Collieries.	Number of Days Worked in Each Month.												Total.
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
Pittsburg Coal Co.	15.2	13.5	15.7	17.1	17.8	20.4	19.6	18.2	18.5	18.5	13.3	16.2	206
New York and Cleveland Gas Coal Co.	25.6	22.2	21.3	22	22.2	23.1	23.8	23.6	22.8	23.6	21.7	23.7	214
Monongahela River Consolidated Coal and Coke Co.													
Allegheny...													
Washington...													
Allegheny...	24	17	21.6	22	21	15	21.5	22	24	22.5	17	16.5	195.6
Carnegie Coal Co.	21.5	18.5	20	20.5	21.5	20.6	18.5	17	20.5	19.5	16	15.5	188.5
Which Hazel Coal Co.	18	16.5	14.5	17	18	20.6	14.5	16	17	18.5	20	16.5	208.5
Pittsburg Terminal Railroad and Coal Co.													
Musshoff Coal and Coke Co.													
Pittsburg and Buffalo Co.													
Bradlow Lanes Coal Co.													
Washington...													
Allegheny...	25	23.5	24.5	16	22	24.5	25	25	24.5	25.5	22.3	25	189
John M. Cook...													
Allegheny...	18	18	19	18	19	18	19	18	18	18.5	18	15.5	217
Pittsburg and Buffalo Co.	15.5	8	14	16	16.5	18	16	13	13	12.5	10	11.5	168.5
Washington...	9	11	13	14	12	13	14	13	12	13	14	12	150
John M. Cook...													
Allegheny...													
Washington...	19	15	16	17	20	21.5	23	20.5	23	18	15	16	138
Allegheny...	15.5	13.5	16	13	17	21.5	23	20.5	23	18	15	16	138
National Mining Co.													
Pan Handle Mining Co.													
Allegheny...	19	19	21	18	20	16	18	22	20	21	21	21	197
Marquette Coal Co.													
Allegheny...													
E. W. Harford...													
Vietor Coal and Coke Co.													
Bulger Block Coal Co.	6	8	8	8	9	10	12	10	9	10	12	18	60.5
Washington...	21.5	15.5	15.5	21	17.5	17	22.5	16.5	16.5	13	15.5	18	224
Charlton Coal and Coke Co.													
P. P. Hornum...													
Allegheny...	24	21.5	23	20.5	21.5	25	22.5	22	22	24	18	18	203
Thomas Fox Estate...	22	24	25	19	21	25	22.5	24.5	22	24	21	25	217
Pittsburg and Castle Shannon Railroad Co.	22.5	24	25.5	21	21	25	22	21	21	25	21	26	237.5
W. S. R. Hayes...	27	24	26	26	27	25	26	26	26	27	25	26	311
G. A. Venable...	26	24	29	21	17	15	24	26	24	23	24	26	270
Patterson & Robbins...	24	22	24	23	20	21	19	23	24	23	24	23	276
Allegheny...													
Kramer & Pauliz...	25	21	26	26	25	26	26	25	26	27	25	26	297

Names of Operators and Collieries.

County.

TABLE IV.—List of fatal accidents that occurred in and about the mines of the Seventh Bituminous District for the year ending December 31, 1902.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Feb. 4	Frank Wisnoloski, ...	German, ...	Driver, ...	20	S.	...	...	Partridge, ...	Allegheny...	Killed by mine cars; he neglected to use springs, the cars jumped the track and crushed him against side of passageway.
5	Robert Simpson, ...	English, ...	Loader, ...	45	S.	...	...	Moan Run, ...	Allegheny...	Killed by mine cars; he was traveling on motor road in the mine and was run down by trip of loaded cars. He should have used the traveling road.
21	Sanador Donioce, ...	Hungarian, ...	Loader, ...	27	M. 1	1	...	First Pool No. 2, ...	Allegheny...	Killed by fall of roof in his room; he failed to set props.
23	Philip Leonoski, ...	Russian, ...	Miner, ...	27	S.	...	...	Pan Handle, ...	Allegheny...	Killed by fall of slate in pillar working.
March 3	John Pollock, ...	Russian, ...	Loader, ...	52	M. 1	3	...	Lake Superior, ...	Allegheny...	Killed by mine cars; the motor trip was passing along the entry and one of the couplings broke, and thinking the cars was coming into his room he ran out into the entry and was struck by the cars as they rolled back.
April 4	Joseph Batonas, ...	Polish, ...	Machine runner, ...	31	M. 1	...	...	Hazel, ...	Washington,	Fatally injured by fall of slate in his room.
16	Anthony Berti, ...	Austrian, ...	Loader, ...	26	S.	...	...	Meadow Lands, ...	Washington,	Killed by fall of slate in his room.
22	Tony Sautz, ...	Austrian, ...	Loader, ...	28	M. 1	...	...	First Pool No. 1, ...	Allegheny...	Fatally injured by fall of slate in his room.
5	Thomas Holmes, ...	English, ...	Miner, ...	52	M. 1	1	...	Brier Hill, ...	Washington,	Fatally injured by fall of slate in his room.
6	Peter Gehms, ...	German, ...	Machine runner, ...	39	M. 1	4	...	Nixon, ...	Allegheny...	Killed by fall of slate in his room.
24	Louis Budjova, ...	Italian, ...	Miner, ...	16	S.	...	...	Oak Hill No. 5, ...	Allegheny...	Killed by fall of slate in pillar workings; this boy was working with an older brother who failed to set sufficient props for protection, the slate fell from between the props which were too far apart.
3	Joseph Schenka, ...	Hungarian, ...	Loader, ...	28	M. 1	...	...	Morgan, ...	Allegheny...	Killed by fall of slate in his room.
11	Charles Camler, ...	Russian, ...	Loader, ...	21	M. 1	1	...	Elveth, ...	Allegheny...	Killed by flying coal from a blast.
18	John Csomas, ...	Hungarian, ...	Loader, ...	19	M. 1	...	...	Rich Hill, ...	Washington,	Killed by fall of slate in his room.
26	William Kotson, ...	Slovakian, ...	Loader, ...	22	M. 1	...	...	Essen No. 5, ...	Allegheny...	Killed by fall of slate in his room.

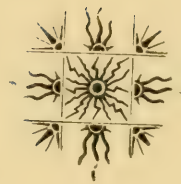
April	14	Jos. Vangeyer,	Belgian,	Loader,	26	M. Jumbo,	Washington,	Foot severely injured by fall of slate.
	15	James Clase,	American,	Company man,	43	S. Shaw No. 1,	Washington,	Leg broken by railroad cars.
	16	Richard Cox,	English,	Company Man,	38	M. Grant,	Allegheny,	Seriously injured by a mine car.
	18	Mike Grova,	Polish,	Miner,	50	M. Lake Superior,	Allegheny,	Ankle injured by fall of slate.
	20	Goal Gate,	Italian,	Miner,	30	M. Oak Hill No. 4,	Washington,	Injured, kicked by a mule.
	23	Laureno Gellirt,	Italian,	Driver,	16	S. S. Jumbo,	Washington,	Shoulder injured by cars.
	25	Angelo Ross,	Italian,	Miner,	50	S. S. Cherry,	Allegheny,	Injured by cars in the mine.
	3	Samuel Johnston,	Swedish,	Miner,	57	S. S. Jumbo,	Washington,	Back injured by fall of slate.
	4	Chas. McFarland,	Italian,	Leader,	46	M. Dickson,	Allegheny,	Shoulders injured by fall of roof coal.
	4	Stann Sagar,	American,	Machine runner,	33	M. Morgan,	Allegheny,	Leg broken by fall of slate.
	8	Mike Eusiss,	Albanian,	Leader,	28	M. Partridge,	Allegheny,	Leg broken by fall of slate.
	10	Sam. Pigeo,	Polish,	Leader,	19	M. Lake Superior,	Allegheny,	Leg broken by cars.
	12	Jacob Tollatty,	American,	Driver,	28	M. S. Shaw No. 2,	Allegheny,	Foot injured by mine cars.
	12	Jos. Holland,	Slavonic,	Driver,	21	M. S. Shaw No. 1,	Washington,	Foot injured and by fall of coal and slate.
	30	Leapol Postey,	American,	Driver,	40	M. Duquesne,	Washington,	Ankle dislocated by fall of slate.
May	5	Frank Abbelet,	French,	Miner,	18	S. S. Witch Hazel,	Allegheny,	Leg broken by fall of slate.
	7	James Bussell,	French,	Miner,	44	S. S. First Pool No. 2,	Allegheny,	Leg broken by fall of roof coal.
	13	William Sperrings,	English,	Scrapper,	16	S. S. Mansfield No. 2,	Washington,	Injured by fall of roof coal.
	13	James Mall,	American,	Scrapper,	18	S. S. Rich Hill,	Washington,	Injured by fall of roof coal.
	16	Sam. Kager,	American,	Machine runner,	21	M. Jumbo,	Washington,	Leg broken by fall of slate.
	21	Joseph Varsen,	Polish,	Miner,	33	M. Lick Run,	Allegheny,	Leg broken by fall of slate.
	22	John Murthey,	American,	Driver,	22	S. S. Bridgeville,	Allegheny,	Injured, caught between cars.
	23	John Murthey,	American,	Driver,	30	S. S. Carmochie,	Allegheny,	Collar bone broken by fall of slate.
	25	Joseph Rushmosky,	German,	Miner,	23	S. S. Mansfield No. 2,	Allegheny,	Collar bone broken by fall of slate.
	26	Edwin Jones,	American,	Driver,	40	S. S. Oak Hill No. 5,	Allegheny,	Leg broken by cars.
	28	William Riley,	American,	Driver,	30	S. S. Midland No. 1,	Washington,	Leg broken by mine cars.
June	4	John Gilmer,	Swedish,	Driver,	24	S. S. Midland No. 1,	Washington,	Leg injured by mine cars.
	4	John Cooper,	American,	Driver,	18	S. S. Midland No. 1,	Washington,	Four ribs broken, caught between car and passageway.
	9	Mike Cronkney,	Slavonic,	Leader,	33	M. Midland No. 3,	Washington,	Arm broken, caught between car and side of entry.
	10	James Rane,	Italian,	Leader,	25	S. S. National,	Allegheny,	Injured by fall of slate.
	11	A. Dollay,	American,	Door boy,	15	S. S. Federal No. 2,	Allegheny,	Injured by cars he fell asleep at his post and was struck by car.
	19	George Kiedling,	Hungarian,	Driver,	19	S. S. Cherry,	Allegheny,	Injured by a car in the mine.
	21	Joseph Bondorski,	Polish,	Leader,	32	S. S. Laurel Hill No. 1,	Allegheny,	Injured by fall of slate.
	21	Jos. Patter,	American,	Leader,	35	S. S. Oak Ridge,	Allegheny,	Injured by fall of slate.
	25	William Pemberty,	American,	Driver,	20	S. S. Moon Run,	Allegheny,	Leg broken by cars in the mine.
July	2	E. Bozier,	Polish,	Driver,	23	M. Federal No. 2,	Allegheny,	Injured by cars.
	8	Frank Soir,	Slavonic,	Leader,	18	S. S. Essen No. 2,	Allegheny,	Leg broken by fall of slate.
	14	Feater Polle,	Italian,	Leader,	25	S. S. Summer Hill,	Allegheny,	Burned by powder from a premature blast.
	14	Mike Doanls,	Polish,	Machine runner,	35	M. Summer Hill,	Allegheny,	Burned by a premature blast.
	15	John Schuch,	Polish,	Machine runner,	33	M. Summer Hill,	Allegheny,	Burned by a premature blast.
	15	Mike Moschmich,	Polish,	Leader,	33	M. Summer Hill No. 1,	Allegheny,	Injured by fall of slate.
	23	Christ Keisling,	American,	Driver,	40	M. Cherry,	Allegheny,	Injured by fall of coal and slate.
	23	Feater Mathalis,	Polish,	Scrapper,	25	M. Partridge,	Allegheny,	Injured by fall of coal and slate.
	25	Steve Mathalis,	German,	Machine runner,	47	M. Packs Run,	Allegheny,	Leg broken by fall of slate.
	27	Lewis Henthiger,	German,	Leader,	42	M. Packs Run,	Allegheny,	Leg broken by fall of slate.
Aug	1	John Nauth,	Hungarian,	Machine runner,	32	M. Vulsan,	Allegheny,	Injured by electric mining machine.
	1	Mike Poscher,	Italian,	Machine runner,	25	S. S. Summer Hill,	Allegheny,	Skull fractured by fall of slate.
	1	Comerio Abnolis,	Italian,	Leader,	29	S. S. First Pool No. 1,	Allegheny,	Hip dislocated by fall of slate.

TABLE V—Continued.

Date of Accident.	Name of Person.	Nationality by Birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Aug.	4 Anthony Albers,	Polish,	Loader,	30	S.	Summer Hill,	Allegheny, ...	Injured by fall of slate.
1	Robert D. Gregory,	American,	Driver,	18	S.	Laurel Hill No. 2,	Washington, ...	Injured by cars.
2	Joseph Tytko,	Polish,	Loader,	23	M.	Boyd,	Allegheny, ...	Arm broken by fall of slate.
3	Stephen Hevelog,	Hungarian,	Loader,	24	M.	Laurel Hill No. 2,	Washington, ...	Arm broken by fall of slate.
5	John B. Smith,	American,	Driver,	24	M.	Essen No. 2,	Allegheny, ...	Injured by car.
7	Leah Moler,	Hungarian,	Loader,	30	S.	Midland No. 2,	Washington, ...	Thigh broke by fall of coal.
8	James Pasgall,	Italian,	Miner,	38	M.	Oak Hill No. 5,	Allegheny, ...	Thigh broke by fall of coal.
11	James Delancey,	Italian,	Miner,	40	M.	Oak Hill No. 5,	Allegheny, ...	Jaw bone broke and one eye knocked out by fall of slate.
12	White Carter,	American,	Miner,	45	M.	Harrison,	Allegheny, ...	Seriously injured by fall of slate.
13	Partcher Valentine,	American,	Scrapper,	13	S.	Harrison,	Allegheny, ...	Injured by fall of slate.
14	David McLean,	Scottish,	Miner,	56	M.	Laurel Hill No. 2,	Washington, ...	Foot dislocated by a car.
15	Chas Eschardt,	German,	Miner,	27	M.	Hartley & Marshall,	Allegheny, ...	Flap injured by a fall of slate.
16	Andy Rushul,	Polish,	Miner,	41	M.	Becks Run,	Allegheny, ...	Flap injured by fall of slate.
16	William Chise,	Austrian,	Loader,	27	M.	Laurel Hill No. 1,	Allegheny, ...	Injured by fall of slate.
18	Harry Meadrelle,	American,	Company man,	27	S.	Hartley & Marshall,	Allegheny, ...	Injured by a lump of coal falling upon him at timble.
20	John Bernirskey,	Polish,	Loader,	17	S.	Hartley & Marshall,	Allegheny, ...	Injured while lifting slate into a car.
22	William Koretting,	German,	Loader,	29	M.	Midland No. 3,	Washington, ...	Two ribs broken by cars in the mine.
23	John Brown,	American,	Miner,	19	S.	Becks Run,	Allegheny, ...	Leg broken by fall of coal.
24	Mike Beck,	Polish,	Driver,	30	S.	Essen No. 1,	Allegheny, ...	Knee injured by car.
Sept.	4 John Brazier,	Polish,	Loader,	33	S.	Boyd,	Allegheny, ...	Wrist broken by a car.
6	Peter Dedrin,	Polish,	Scrapper,	24	S.	Essen No. 1,	Allegheny, ...	Foot injured by outer chain of electric mining machine.
9	Alexander Plants,	Italian,	Miner,	41	S.	Harrison,	Allegheny, ...	Collar bone broken by a car.
10	Stephen Talub,	American,	Loader,	37	M.	Shaw No. 1,	Allegheny, ...	Injured by fall of slate.
20	William McLaughlin,	Polish,	Loader,	22	M.	Boyd,	Washington, ...	Injured by fall of slate.
24	Martin Medruden,	German,	Driver,	19	S.	Becks Run,	Allegheny, ...	Arm broken by cars.
25	William M. Sine,	Polish,	Loader,	22	M.	Becks Run,	Allegheny, ...	Leg broken by fall of slate.
Oct.	1 Sawe Slesak,	Polish,	Miner,	44	M.	Midland No. 1,	Washington, ...	Leg fractured by fall of roof coal.
4	William Banks,	English,	Machine runner,	39	S.	Mansfield No. 2,	Allegheny, ...	Injured internally by fall of coal and slate.
4	George Modritsch,	Austrian,	Loader,	40	S.	Essen No. 2,	Allegheny, ...	Ankle broken by car.
7	Ernest Bertona,	Austrian,	Miner,	26	S.	Meadow Lands,	Washington, ...	Seriously injured by a fall of slate.
16	Martin Baum,	American,	Driver,	23	S.	Becks Run,	Allegheny, ...	Injured by cars.
23	John Dudlow,	American,	Machine runner,	26	M.	Hartley & Marshall,	Allegheny, ...	Collar bone broken by a fall of coal.

Sept.

Oct.



Eighth Bituminous District.

CLEARFIELD AND CENTRE COUNTIES.

Philipsburg, Pa., February, 1903.

Hon. James W. Latta, Secretary of Internal Affairs, Harrisburg, Pa.

Sir: In compliance with the Bituminous mining law and its provisions, as approved May 15, 1893, I herewith submit my annual report for the Eighth Bituminous District for the year ending December 31, 1902.

The report contains the usual statistical tables, with the total production of coal in net tons; the number of accidents that occurred in and about the mines, and the condition of the mines, as to healthfulness and safety, and the improvements made therein.

The coal production has been one-third greater than that of the preceding year, but the number of accidents has remained the same.

1,458,930 tons of coal have been produced for each fatal accident, and 162,102 tons for each non-fatal accident, which is the highest record that has been attained in this district for the past ten years, and the result is attributable alike to more vigilance and care on the part of the workmen, the efforts put forth by the operators to equip and supply their mines with modern methods and material, and a general tendency on the part of the mine officials to enforce more rigid discipline.

Other data is given more fully and at length in the report.

All of which is respectfully submitted.

JOSEPH KNAPPER,

Inspector.

Summary of Statistics for 1902.

Number of mines in district,	126
Number of mines in operation during 1902,	126
Number of tons of coal produced,	4,376,762
Number of tons shipped to market,	4,249,594

Number of tons sold at mines to local trade,	11,938
Number of tons consumed at mines in generating steam and heat,	53,134
Number of coke ovens in the district,	106
Number of coke ovens in operation during 1902,	106
Number of tons of coke produced,	44,731
Number of tons of coal used in manufacture of coke, ...	62,096
Number of tons produced by pick mining,	3,895,101
Number of tons produced by compressed air machines, .	342,420
Number of tons produced by electrical machines,	139,241
Number of persons employed inside the mines,	6,940
Number of persons employed outside, including coke workers,	554
Number of persons employed at manufacture of coke, ..	40
Number of fatal accidents inside the mines,	2
Number of tons produced for each fatal accident inside, .	2,188,381
Number of persons employed per fatal accident inside, ..	3,470
Number of fatal accidents outside,	1
Number of persons employed per fatal accident outside, .	554
Number of wives made widows by fatal accidents,	2
Number of children orphaned by fatal accidents,	5
Number of non-fatal accidents inside of mines,	24
Number of persons employed per non-fatal accident in- side,	289
Number of non-fatal accidents outside,	3
Number of persons employed per non-fatal accident out- side,	184
Number of electric motors used inside,	20
Number of fans used for ventilation,	19
Number of furnaces used for ventilation,	99
Number of non-gaseous mines in operation during 1902, .	126
Number of new mines opened in 1902,	14
Number of old mines abandoned during 1902,	2

A. Production of Coal During the Year 1902.

Names of Companies.	Tons, Net.
Berwind-White Coal Mining Co.,	541,756
Morrisdale Coal Mining Co.,	402,890
Peale, Peacock and Kerr, Inc.,	548,444
Beech Creek Coal and Coke Co.,	406,757
Henry Liveright,	95,969
Irish Brothers,	277,928

Cambria Coal Mining Co.,	82,494
Wm. A. Gould & Bro. and Reakirt Bros. & Co.,	86,939
Victoria Coal Mining Co.,	152,115
Ashman and Ophir Coal Co.,	159,517
Henrietta Coal Mining Co., Limited,	50,709
Penn Collieries Co.,	70,423
Moshannon Coal Mining Co.,	53,628
G. L. Whitehead Coal Co.,	61,003
S. J. Mountz,	33,522
James F. Stott,	25,572
H. W. Wortz & Co.,	22,680
Betz Coal Mining Co. and Swoope Coal Co.,	109,792
L. Milton Wilson,	35,675
H. M. Hughes,	24,986
J. R. Brown,	22,342
Thos. C. Heims & Co.,	115,703
Thos. J. Lee,	53,624
M. and F. Craig,	40,320
Harbison-Walker Co.,	34,846
Brown & Dyer,	23,699
O. L. Schoonover,	15,840
American Union Coal Co.,	11,200
Gheen Coal Co.,	90,444
Bulah Coal Co.,	74,680
John J. and H. W. Todd,	74,970
Elsworth & Dunham,	42,160
Adams & Co.,	34,186
Penn Iron Co., Limited,	23,370
Osceola Coal and Coke Co.,	21,158
E. J. Walker & Co.,	17,676
C. D. Loraine,	16,192
Lawton & Cox,	16,404
Clearfield Lumber Co., Limited,	15,069
W. F. Holt,	11,274
Stratton Bros.,	10,329
Brown & Reeves,	9,968
Meadowbrook Mining Co.,	9,610
Hilling & Morgan,	7,948
John Walton & Son,	6,684
J. M. Roberson,	6,593
Townsend and Milsom,	7,125
Beaver Run Coal Co.,	5,750
J. R. Flenner & Co.,	5,432
Mapleton Coal Co.,	5,600
Wm. Casket,	5,247

Stanley Coal Co.,	4,013
S. V. Davis & Co.,	3,151
Lincoln Coal Co.,	1,536
W. G. Fishburn,	9,467
Stott, Hill & Dale,	5,600
Thos. Blythe and Pennsylvania Coal and Coke Co.,....	62,901
J. W. Hooten,	25,083
Anda & Co.,	7,259
Coaldale Mining Co.,	37,800
Powelton Coal Mining Co.,	17,987
Isaac Reese Sons Co.,	20,381
John Barnes & Sons,	13,708
John G. Platt,	3,125
Blair Bros.,	77,545
Samuel Styre,	8,961
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Total,	4,376,762
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B. Showing the number of fatal and non-fatal accidents inside and outside the mines; number of tons of coal produced per fatal and non-fatal accident inside the mines; number of persons employed inside and outside; and the number employed inside and outside for every fatal and non-fatal accident for each company during 1902.

Names of Companies.	Number of lives lost inside.	Number of lives lost outside.	Total number of lives lost.	Number severely injured inside.	Number severely injured outside.	Total number severely injured.	Tons of coal produced per each life lost inside.	Tons of coal produced per serious injury inside.	Number employees inside of mines.	Number employees outside of mines.	Total number employed.	Number of employees inside for each life lost.	Number of employees inside for each severe injury.	Number of employees outside for each life lost.	Number of employees outside for each severe injury.
Berwind-White Coal Mining Co.	1		1		1	1	541,756	135,439	754	68	822	151			
Morrisdale Coal Mining Co.							402,890	291,485	478	107	585	279			
Beale, Hancock & Kerr, Inc.							548,444	137,111	673	37	609	103			
Beale, Hancock & Kerr, Inc.							406,757	293,378	431	33	464	215			
Isabel Mines							138,994	55,585	629	19	648	126			
Victoria Coal Mining Co.		1	1				152,115	297	297	21	224	314		21	
Henrietta Coal Mining Co., Ltd.							50,769	70,769	87	5	92	87			
O. L. Schoenover							15,810	15,810	165	8	173	173			
American Union Coal Co.							11,560	11,560	138	7	145	138			
Elsworth & Lamborn							42,132	21,432	137	1	138	137			
J. R. Plummer & Co.							62,901	5,432	134	1	142	134			
Thos. Elythe & Penn'a Coal and Coke Co.							3,151	17,987	14	8	15	15			
S. V. Davis Co.							17,987	17,987	22	1	23	22			
Powerton Coal Mining Co.															
Totals and averages.	12	1	13	23	3	26	2,188,384	182,345	6,846	354	7,404	2,313	257	184	29

C. Classification of Fatal Accidents for the Year 1902.

		Inside of Mines.										Outside of Mines.															
		By Falls of			By Falling into																						
		Coal.	Shaft.	Roof.	By mine cars.	By explosions of gas.	Smothered by gas.	Powder and dynamite.	By blasts, etc.	Ships.	Stairs.	Manways, breasts, etc.	Crushed at batteries.	By mules.	Self cut by coal, etc.	Miscellaneous causes.	Total inside.	By cars.	By machinery.	By suffocation.	By falling explosions.			Miscellaneous causes.	Total outside.		
February,	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	13	.....	.....	.....	.....	.....	.....	1	1	1	1
September, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals,	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	13	.....	.....	.....	.....	.....	.....	1	1	1	1

D. Classification of Non-fatal Accidents for the Year 1902.

	Inside of Mines.										Outside of Mines.						Grand total.			
	By Falls of			By mine cars.	By explosions of gas.	Smothered by gas.	Powder and dynamite.	By blasts, etc.	By Falling into			Total inside.	By cars.	By machinery.	By suffocation.	By boiler explosions.		Miscellaneous causes.	Total outside.	
	Coal.	Slate.	Roof.						Shafts.	Slopes.	Mineways, breaks, etc.									(Pushed at batteries.	By mules.	Suffocated by coal, etc.	Miscellaneous causes.
January,	1	1		1																5
February,	1																			
March,		1																		
April,	3																			
May,	1	1					1													
June,																				
July,	1																			
August,		1		1																
September,																				
October,	1	1		1																
November,		1																		
December,			1	1																
Totals,	12	7	1	5			1												26	32

G. Nationality of Employes Killed or Fatally Injured Inside and Outside the Mines During 1902.

	Americans.
February,	2
September,	1
Total,	3

H. Nationality of Employes Severely Injured Inside and Outside the Mines During 1902.

	Americans.	English.	Scotch.	Irish.	Germans.	Hungarians.	Slavs.	Russians.	Swedes.	Canadians.	Total.
January,	1		1					1	1		3
February,	1							1			2
March,		1									1
April,		1					2				3
May,		1			1		1				3
June,		1									1
July,	1				1						2
August,				1							1
September,	1	1		1	2	1				1	6
October,	1					1					3
November,	1						1				2
December,											
Totals,	6	4	1	2	4	2	4	2	1	1	27

I. Giving names of operators and mines, kind of openings, type and size of fans; size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each employe per minute in Eighth Bituminous District for the year 1902.

Names of Operators and Mines.	Kind of opening.	(Gaseous or non-gaseous.	Method of ventilation.	Diameter and width of fan in feet.	Water gauge developed—in inches.	Name of fan.	Power used.	Area of furnace bars in square feet.	Number of air splits of air currents.	Number of cubic feet of air per minute entering the mine at inlet.	Total quantity of air per minute circulating in all the splits in cubic feet.	Number of cubic feet per minute passing out at outlet.	Number of persons employed inside.	Average number of cubic feet per minute provided for each person.
Berwind-White Coal Mining Co.														
Atlantic No. 1.	Slope.	Non-gas.	Fan.	4½ x 16	½	Brazil.	Steam.	...	...	35,100	25,050	...	111	316
Eureka No. 2.	Shaft.	Non-gas.	Fan.	4½ x 16	½	Brazil.	Steam.	...	...	32,400	25,200	...	70	402
Eureka No. 3.	Shaft.	Non-gas.	Fan.	4½ x 16	½	Brazil.	Steam.	...	...	56,250	33,000	...	145	387
Eureka No. 4.	Drift.	Non-gas.	Fan.	3 x 10	¾	Brazil.	Steam.	...	...	18,000	16,400	...	58	310
Eureka No. 5.	Drift.	Non-gas.	Fan.	4½ x 16	½	Brazil.	Steam.	...	...	36,000	25,250	...	43	404
Eureka No. 6.	Drift.	Non-gas.	Fan.	2 x 12	¾	Stine.	Steam.	42	...	10,500	10,200	...	37	300
Eureka No. 7.	Drift.	Non-gas.	Furnace.	...	1½	Capell.	Steam.	...	...	24,000	24,000	...	30	300
Eureka No. 8.	Drift.	Non-gas.	Fan.	7 x 11	1	...	...	...	...	66,000	50,000	...	82	304
Morrisdale Coal Mining Co.														
Morrisdale No. 1.	Shaft.	Non-gas.	Fan.	2 x 12	½	Stine.	Steam.	...	4	42,000	20,000	45,000	224	191
Morrisdale No. 2.	Shaft.	Non-gas.	Fan.	2 x 12	½	Stine.	Steam.	...	5	30,550	30,550	32,000	112	272
Morrisdale No. 3.	Shaft.	Non-gas.	Steam.	2 x 12	½	...	Steam.	...	2	5,700	5,700	6,000	47	121
Morrisdale No. 4.	Drift.	Non-gas.	Furnace.	...	1½	...	...	12	...	3,800	4,140	4,110	20	297
Mabel.	Drift.	Non-gas.	Furnace.	...	1½	...	...	30	...	6,600	6,600	12,000	10	417
Troy Nos. 1 and 2.	Drift.	Non-gas.	Furnace.	...	1½	...	...	30	...	6,600	5,900	7,400	18	268
Troy No. 3.	Drift.	Non-gas.	Natural.	...	1½	...	...	12	...	4,000	4,000	4,000	15	266
Troy No. 4.	Drift.	Non-gas.	Furnace.	...	1½	...	...	10	...	8,700	8,700	9,500	26	334
Madera No. 1.	Drift.	Non-gas.	Furnace.	...	1½	...	...	...	...	...	...	...	...	...
Pease, Peacock & Kerr, Inc.														
Deatur No. 1.	Drift.	Non-gas.	Furnace.	...	1½	...	...	30	...	14,800	14,800	15,250	55	290
Deatur No. 2.	Drift.	Non-gas.	Furnace.	...	1½	...	...	20	...	8,000	8,000	...	50	125
Deatur No. 3.	Drift.	Non-gas.	Furnace.	...	1½	...	...	30	...	...	...	24,200	200	122

*Broken strata.

TABLE I—Continued.

Names of Operators and Mines.	Kind of opening.	Gasous or non-gaseous.	Method of ventilation.	Diameter and width of fan in feet.	Water range developed—in inches.	Name of fan.	Power used.	Area of furnace bars in square feet.	Number of air splits of air currents.	Number of cubic feet of air per minute entering the mine at inlet.	Total quantity of air per minute circulating in all the splits in cubic feet.	Number of cubic feet per minute passing out at out- let.	Number of persons employed inside.	Average number of cubic feet per minute provided for each person.
Ducatur No. 4.	Drift.	Non-gas.	Furnace.	12	$\frac{1}{2}$	Stine.	Steam.	25	..	9,300	9,300	12,500	34	273
Ducatur No. 6.	Drift.	Non-gas.	Furnace.	12	$\frac{1}{4}$	Stine.	Steam.	12	4	5,400	5,400	6,000	10	540
Ogle No. 1.	Drift.	Non-gas.	Fan.	12	$\frac{3}{4}$	Stine.	Steam.	12	4	27,600	27,600	31,000	230	130
Ogle No. 2.	Drift.	Non-gas.	Fan.	12	$\frac{3}{4}$	Stine.	Steam.	12	4	12,700	12,700	13,400	65	195
Ogle No. 7.	Drift.	Non-gas.	Natural.	12	$\frac{3}{4}$	Stine.	Natural.	12	4	12,700	12,700	13,400	65	195
Irish Bros. & Co.														
Baltic Nos. 1 and 3.	Drift.	Non-gas.	Furnace.	12	$\frac{1}{2}$	Stine.	Steam.	30	..	7,500	10,500	10,500	64	164
Colorado No. 2.	Drift.	Non-gas.	Furnace.	12	$\frac{1}{4}$	Stine.	Steam.	30	..	7,500	10,500	10,500	56	133
Colorado Nos. 3 and 4.	Drift.	Non-gas.	Furnace.	12	$\frac{1}{4}$	Stine.	Steam.	30	..	21,500	18,800	32,000	94	228
Colorado No. 5.	Drift.	Non-gas.	Furnace.	12	$\frac{1}{4}$	Stine.	Steam.	30	..	15,800	15,800	22,600	144	169
Cuban.	Drift.	Non-gas.	Furnace.	12	$\frac{1}{2}$	Stine.	Steam.	30	..	7,600	7,600	8,500	46	165
Guinn.	Drift.	Non-gas.	Furnace.	12	$\frac{1}{2}$	Stine.	Steam.	30	..	7,600	7,600	8,500	46	165
Jefferson.	Drift.	Non-gas.	Furnace.	12	$\frac{1}{2}$	Stine.	Steam.	30	..	7,900	9,200	10,500	60	153
Gearhart.	Drift.	Non-gas.	Furnace.	12	$\frac{1}{2}$	Stine.	Steam.	30	..	7,900	9,200	10,500	60	153
Red Jacket.	Drift.	Non-gas.	Furnace.	12	$\frac{1}{2}$	Stine.	Steam.	30	..	10,700	10,700	12,000	83	128
Red Jacket.	Drift.	Non-gas.	Furnace.	12	$\frac{1}{2}$	Stine.	Steam.	36	..	9,100	9,100	9,600	47	193
Cambria Coal Mining Co.														
Leland No. 1.	Drift.	Non-gas.	2 fans.	2 x 7 & 4 x 10	$\frac{3}{4}$	Stine and Brazil.	Steam.	..	2	26,000	26,000	24,900	138	188
Leland No. 2.	Drift.	Non-gas.	Furnace.	12	$\frac{3}{4}$	Stine and Brazil.	Steam.	20	..	4,700	4,700	6,000	33	142
Leland No. 3.	Drift.	Non-gas.	Furnace.	12	$\frac{3}{4}$	Stine and Brazil.	Steam.	20	..	4,700	4,700	6,000	33	142
Leland No. 4.	Drift.	Non-gas.	Fan.	2 x 7	$\frac{3}{4}$	Brazil.	Steam.	24	..	10,400	10,400	12,000	10	200
Leland No. 5.	Drift.	Non-gas.	Fan.	2 x 7	$\frac{3}{4}$	Brazil.	Steam.	24	..	10,400	10,400	12,000	10	200
Leland No. 6.	Drift.	Non-gas.	Furnace.	12	$\frac{3}{4}$	Stine and Brazil.	Steam.	18	..	7,200	7,200	8,500	20	200
Beach Creek Coal & Coke Co.														
Forest No. 1.	Drift.	Non-gas.	Furnace.	12	$\frac{1}{2}$	Stine and Brazil.	Steam.	42	..	18,900	18,900	20,700	96	196
Forest No. 2.	Drift.	Non-gas.	Furnace.	12	$\frac{1}{2}$	Stine and Brazil.	Steam.	42	..	18,900	18,900	20,700	96	196
Kyle.	Drift.	Non-gas.	Fan.	4 x 10	$\frac{3}{4}$	Brazil.	Electric.	25	..	6,700	6,700	8,100	108	564
Summersville No. 8.	Drift.	Non-gas.	Fan.	4 x 10	$\frac{3}{4}$	Brazil.	Electric.	25	..	54,000	54,000	72,000	108	564
Summersville No. 9.	Drift.	Non-gas.	Fan.	4 x 10	$\frac{3}{4}$	Capell.	Steam.	..	4	58,000	34,700	63,000	227	233

†Temporary.

W. A. Gould & Bro.									
Hendersen No. 4.	Drift....	2 fur's... Furnace.	Non-gas.	14	.....	40	.....	3,600	4,200
Hendersen No. 5.	Drift....	Furnace.	Non-gas.	14	.....	12	.....	17,200	18,600
Middle No. 1.	Drift....	Furnace.	Non-gas.	14	.....	29	2	6,400	7,600
Middle No. 2.	Drift....	Furnace.	Non-gas.	14	.....	20	2	8,400	8,400
Loraline.	Drift....	2 fur's... Furnace.	Non-gas.	14	.....	40	2	11,100	12,600
H. Liverlight.									
Fairmount No. 2.	Drift....	2 fur's... Furnace.	Non-gas.	14	.....	50	3	24,700	27,000
Fairmount No. 3.	Drift....	Furnace.	Non-gas.	T.	.....	9	.....	4,500	5,300
Fairmount No. 4.	Drift....	Furnace.	Non-gas.	14	.....	36	.....	14,200	15,000
Phoenix.	Drift....	Furnace.	Non-gas.	14	.....	30	.....	3,600	5,000
Fairmount No. 5.	Drift....	Furnace.	Non-gas.	14	.....	9	.....	2,700	3,000
Victoria Mining Co.									
Acme No. 1.	Slope....	Fan....	Non-gas.	14	.....	.....	.....	26,800	38,400
Acme No. 2.	Slope....	Fan....	Non-gas.	14	.....	.....	4	.....	.....
Acme No. 3.	Drift....	Furnace.	Non-gas.	14	.....	20	.....	9,400	12,000
Acme No. 5.	Drift....	Furnace.	Non-gas.	T.	.....	12	.....	.....	.....
Acme No. 6.	Drift....	None....	Non-gas.	14	.....	.....	9	.....	.....
J. Swires & Ophir Coal Co.									
Ashtman.	Drifts....	2 fur's... Furnace.	Non-gas.	14	.....	44	2	12,500	12,600
Chen.	Slope....	Furnace.	Non-gas.	14	.....	.....	.....	14,500	16,700
Ophir No. 1.	Drift....	Furnace.	Non-gas.	14	.....	42	2	11,400	21,600
Douglas.	Slope....	Furnace.	Non-gas.	14	.....	30	.....	6,700	7,600
Henrietta Coal Mining Co.									
Henrietta.	Drift....	2 fur's... Furnace.	Non-gas.	14	.....	50	2	3,700	4,200
Frankish.	Drift....	Furnace.	Non-gas.	T.	.....	12	.....	2,400	3,800
Mordian.	Drift....	Furnace.	Non-gas.	14	.....	26	.....	3,600	4,500
Penn. Collieries Co.									
Falcon No. 1.	Drift....	Furnace.	Non-gas.	14	.....	20	.....	3,600	7,500
Falcon No. 2.	Drift....	Furnace.	Non-gas.	14	.....	25	.....	36,700	38,000
Falcon No. 5.	Drift....	Fan....	Non-gas.	14	.....	.....	2	14,300	16,500
Mashannon Coal Mining Co.									
Mashannon No. 1.	Drift....	Furnace.	Non-gas.	T.	.....	12	.....	7,500	8,400
Mashannon No. 2.	Drift....	Furnace.	Non-gas.	14	.....	16	.....	2,700	3,000
Mashannon No. 3.	Drift....	Furnace.	Non-gas.	T.	.....	15	2	5,400	6,200
Mashannon No. 4.	Drift....	Natural.	Non-gas.	14	.....	.....	.....	5,400	6,400
Mashannon No. 5.	Drift....	Natural.	Non-gas.	14	.....	.....	.....	.....	.....
Brown & Lowrey.									
Union No. 3.	Drift....	Furnace.	Non-gas.	T.	.....	9	.....	9,240	10,200
Union No. 5.	Drift....	Furnace.	Non-gas.	14	.....	20	2	8,100	9,200
Eureka No. 1.	Drift....	Furnace.	Non-gas.	14	.....	48	.....	5,080	11,800
Betz Coal Mining Co.									
Betz No. 1.	Drift....	Furnace.	Non-gas.	14	.....	36	2	17,400	19,800
Betz No. 2.	Drift....	Furnace.	Non-gas.	14	.....	36	.....	11,700	16,000
Betz No. 18.	Drift....	Furnace.	Non-gas.	T.	.....	26	.....	10,900	19,300

TABLE I—Continued.

Names of Operators and Mines.	Kind of opening.	(Gaseous or non-gaseous.	Method of ventilation.	Diameter and width of fan in feet.	Water gauge developed—in inches.	Name of fan.	Power used.	Area of furnace bars in square feet.	Number of air splits of air currents.	Number of cubic feet of air per minute entering the mine at inlet.	Total quantity of air per minute circulating in all the splits in cubic feet.	Number of cubic feet per minute passing out at outlet.	Number of persons employed inside.	Average number of cubic feet per minute provided for each person.
M. & F. Craig.	Drift....	Non-gas.	Furnace.	.....	T. 1/4	.....	.....	12	.....	3,400	3,400	7,500	15	250
Sterling No. 2.	Drift....	Non-gas.	Furnace.	.....	.....	.....	.....	20	.....	8,100	8,100	10,000	37	218
Sterling No. 3.	Drift....	Non-gas.	Furnace.	.....	.....	.....	.....	20	.....	6,600	6,600	7,400	9	733
Blair Bros.	Drift....	Non-gas.	Furnace.	.....	T. 1/4	.....	.....	20	.....	11,800	15,600	17,800	50	312
Orient No. 1.	Drift....	Non-gas.	Furnace.	.....	1/2	.....	.....	30	.....	.....	.....	.....	.....	.....
Orient No. 2.	Drift....	Non-gas.	Furnace.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Orient No. 3.	Drift....	Non-gas.	Furnace.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Thomas C. Helms.	Drift....	Non-gas.	Furnace.	.....	1/4	.....	.....	56	2	15,200	16,000	17,000	82	197
Electric.	Drift....	Non-gas.	Furnace.	.....	1/4	.....	.....	25	2	4,300	8,700	8,700	68	127
Lenore.	Drift....	Non-gas.	Furnace.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
G. L. Whitehead Coal Co.	Drift....	Non-gas.	Furnace.	.....	1/4	.....	.....	20	.....	7,200	7,200	8,000	39	184
Standard No. 1.	Drift....	Non-gas.	Furnace.	.....	1/4	.....	.....	25	.....	4,950	4,950	6,800	26	180
Standard No. 2.	Drift....	Non-gas.	Furnace.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Thomas Blythe.	Drift....	Non-gas.	Furnace.	.....	1/2	.....	.....	36	.....	8,400	8,400	11,800	45	188
Alexandra.	Drift....	Non-gas.	Furnace.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
California.	Drift....	Non-gas.	Furnace.	.....	1/2	.....	.....	56	2	14,200	13,200	15,000	84	169
Pennsylvania.	Drift....	Non-gas.	Furnace.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
I. Milton Wilson.	Drift....	Non-gas.	Furnace.	.....	T. 1/4	.....	.....	20	.....	7,500	7,500	6,600	30	250
Schwinn.	Drift....	Non-gas.	Furnace.	.....	.....	.....	.....	25	.....	4,700	4,700	.....	26	180
Bear Run.	Drift....	Non-gas.	Furnace.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
J. & H. Todd Bros.	Drift....	Non-gas.	2 fur's.	.....	1/2	.....	.....	54	3	21,000	21,000	31,200	89	295
Lane Nos. 1 and 2.	Drift....	Non-gas.	Natural.	.....	T.	.....	.....	.....	.....	1,700	1,700	2,700	8	212
Lane No. 3.	Drift....	Non-gas.	Natural.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

1. Not complete.

[illegible]

§New opening; not complete.

J. Names of mines using coal cutting machines, names of machines, power used, geological and local names of seams, thickest and thinnest seams where machines are used, and the approximate number of tons produced by machines during 1902.

	Kind of opening.	Gaseous or non-gaseous.	Name and number of machines in use.					Power used by machines.	Geological and local name of seam.	Average thickness in inches.	Height of seam in inches.		Approximate number of tons produced by machines.
			Ingersoll.	Sullivan.	Harrison.	Morgan-Gardner.	Thickest.				Thinnest.		
Eureka No. 28.	Shaft.	Non-gas.	10	10	10	10	Air.	B. Lower Kittanning.	4.9	4.6	60,000		
Morrisdale No. 1.	Shaft.	Non-gas.	12	14	14	14	Air.	B. Lower Kittanning.	4.3	3.6	167,120		
Morrisdale No. 2.	Shaft.	Non-gas.	9	11	11	11	Air.	B. Lower Kittanning.	4.3	3.6	88,665		
Morrisdale No. 3.	Shaft.	Non-gas.	12	2	2	2	Air.	B. Lower Kittanning.	3.9	3.6	5,353		
Maiden No. 1.	Twift.	Non-gas.	4	4	4	4	Air.	B. Lower Kittanning.	3.6	3.4	4,000		
Ducatur No. 3.	Drift.	Non-gas.	4	4	4	4	Electricity.	Lower Freeport.	3.6	3.4	49,000		
Ogle No. 1.	Drift.	Non-gas.	10	10	10	10	Air.	B. Lower Kittanning.	3.6	3.4	11,200		
Summersville No. 8.	Drift.	Non-gas.	4	4	4	4	Electricity.	B. Lower Kittanning.	3.6	3.4	30,241		
Meadow Brook.	Drift.	Non-gas.	4	4	4	4	Air.	B. Lower Kittanning.	3.2	3.4	9,610		
Totals.			14	35	4	8	61				481,661		

A Description of Fatal Accidents that Occurred in and About the Mines.

The first accident that occurred during the year, caused the death of William Hill, a driver. He was walking between the mule and three loaded cars on a grade, against the loads, of two feet per one hundred, and on reaching No. 2 room the grade was in the opposite direction, and he stepped to one side to allow the first load to pass. In attempting to get between the two first loads he must have made a misstep, the cars catching him beside the heading pillar, crushing his body and dislocating his neck.

The second accident was caused by a fall of roof in Red Jacket mine, resulting in the death of Hunes Hallabaugh, a miner. He was undermining coal in the cross cut in the pillar at the face of his room, and had props set within four feet of where he worked, when a piece of fire-clay and slate roof fell between the props and coal face on him. This mine has a very dangerous roof, having no visible slips, but becomes loose in all kinds of shapes the moment the coal is taken out and the air comes in contact with it.

The last accident occurred outside of the mine, killing Jesse Chapman, a boiler fireman. It seems he was attempting to put water in one of the boilers by means of an injector, but could not accomplish it, and so thinking the check valve on the boiler was stuck which caused the trouble, he began to pound the valve with a hammer, when in reality a globe valve had been shut, which he had failed to notice. At this time the connection with the boiler gave way and he was directly in line with the high pressure boiling water forced from it. He was severely scalded and survived the accident only six hours.

The following is a brief report of the condition of the mines as regards ventilation and drainage:

Berwind-White Coal Mining Co.

Atlantic No. 1, Eureka 5, 7, 16, 19, 22, 24, 27 and 28, have all been well ventilated and drained, the minimum quantity of air being three hundred cubic feet per minute per employe, and a maximum of eight hundred.

Eureka No. 28 mine promises to be the greatest coal producer in this district. Vast additions are already under way in the shape of another compressor, more mining machines, two electric generators, and thirteen ton locomotives for electric mine haulage. A modern stable has been built in the mine for any mules that it may be found necessary to use, which is built of brick with iron doors at inlet and outlet, so that in case of accident by fire in the stables, they can at once be shut off entirely from the rest of the mine.

Morrisdale Coal Mining Co.

Morrisdale No. 1 shaft is not too well ventilated, the capacity of the fan is not sufficient for the extent of the mine workings, and the amount of blasting material used in the mine. But relief was expected from these conditions by connecting No. 1 with No. 3 shaft, which, however, has been delayed by encountering faults and rolls in the strata above and below the coal in No. 3, also by the large volume of water to be handled coming from the broken strata of old workings in the Moshannon seam that was worked above, and it is only a question of time when they will be compelled to put in a fan of greater capacity.

No. 6 mine, also Troy Nos. 1, 2 and 4, and Mabel were in fair condition. The Madera No. 1 mine, a new operation, is to be worked on modern methods, with mining machines by compressed air, with a fan for ventilation.

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Peale, Peacock & Kerr (Inc.).

Decatur Nos. 2, 4 and 6, and Ogle No. 5 have been fairly well ventilated and drained. But Decatur No. 3 mine has had an excessive number of men employed for the volume of air in circulation, and the same is true of Ogle No. 1 mine. A fan has been promised for the latter mine, of greater capacity than the present one.

Irish Brothers.

These mines have increased during the year to double the number formerly owned by this company, which are Baltic Nos. 1 and 2, Colorado Nos. 2, 3, 4 and 5, which was formerly Black Diamond, also Cuba Nos. 2 and 3, Guion, Gearhart and Red Jacket, all of which have been fairly well drained and ventilated during the year.

Cambria Coal Mining Co.

Leland Nos. 1, 2, 4, 5 and 6 have all had a sufficient volume of air in circulation, with a minimum of one hundred and forty-two, and a maximum of three hundred and sixty cubic feet of air per minute per employe in circulation, and they were fairly well drained.

Beech Creek Coal and Coke Co.

Forest Nos. 1 and 2, Kyler and Summerville No. 8 have been well ventilated and drained during the year, with the exception of a

local defect found on right side of Ogle No. 8 mine, but generally having one hundred and ninety-six to five hundred and sixty cubic feet of air per minute in circulation per employe.

W. A. Gould & Bro.

Henderson Nos. 4, 5, and Midvale Nos. 1 and 2 were kept fairly well ventilated, and while the drainage could have been better at times, the excess of water from broken strata and the soft nature of the strata below the coal, were the direct causes of defects, which were difficult to overcome.

H. Liveright.

Fairmount Nos. 2, 3, 4 and 5, and Phoenix mines were well drained and ventilated, having an excess of air over the volume at times needed, which kept the workings in a very healthful condition.

Victoria Mining Co.

Acme Nos. 2, 3, 5 and 6 were in very fair condition, the three last having been opened during the rush in the coal business.

J. Swires and Ophir Coal Co.

Ashman, Ghem and Ohpir No. 1 were well drained and ventilated.

Henrietta Coal Co.

Henrietta No. 1 had not sufficient air at all times, but from the numerous breaks in the strata above the coal seam in parts of the mine, the men were kept supplied with sufficient air, but the velocity could not be determined owing to the numerous openings. Friendship and Meridian mines were kept in very fair condition for the few men employed in them and were fair as to drainage.

Penn Collieries Co.

Falcon Nos. 1, 2 and 3 were fairly well drained and ventilated.

Moshannon Coal Co.

Moshannon Nos. 1, 2, 3 and Nos. 4 and 7 being new openings have not been excessively developed, but are all fairly well ventilated.

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Brown and Dyer.

Union Nos. 3, 5 and 21 were kept in very fair condition.

Betz Coal Co. and Swope.

Betz Nos. 1, 2 and 18 were well ventilated and drained.

M. & F. Craig.

Sterling Nos. 2 and 3 were well ventilated and drained.

Blair Brothers.

Orient Nos. 2 and 3 were well ventilated and drained.

Thomas C. Heims & Co.

Electric and Lenore mines were not supplied with any excess of air, but were kept generally in a healthful condition; the former mine was fairly well drained, but the latter could have been improved.

Thomas Blythe.

Alexandra mine was fairly well ventilated and drained.

G. L. Whitehead Coal Co.

Standard Nos. 1 and 7 were fairly well ventilated and drained.

Todd Brothers.

Lane Nos. 1 and 2 were well ventilated and drained.

Harbison-Walker Co.

Plane and Varner mines were well drained and ventilated.

Lawton & Co.

White Oak No. 1 was well drained and ventilated.

Beaver Run was poorly ventilated on my last visit, and I ordered sections of the mine to be shut down until proper arrange-

ments could be made to supply the necessary volume of air, and to bring the mine up to the proper standard.

The following mines were found in very fair condition:

Ghem, Webster No. 4, Davis, Mapleton, Phoenix, West Moshannon, Meadowbrook, Reese, Royal, Alder Run, Coaldale No. 4, Powelton, Kentuck, Standard No. 4, Franklin, Mt. Vernon No. 7, Lancashire, Lee, Leader, Porter Run, Reading, Mt. Vernon No. 9, Hope, Mt. Vernon No. 10. But Troy and Ophir No. 2 could have been kept in better condition if the air had been properly conducted through the openings.

At the annual examination for mine foreman and fire bosses held in January, 1902, the following persons were successful:

Samuel Patterson, Charles McTaggart, W. H. Gates, W. B. Wilson, George Charlton, James Napier, W. P. Pilkington, Thomas Steed, Jonathan Taylor, William Purdon, Frank McGowan, M. Wayne, S. S. Packer and James Walker.

Board of Examiners: Joseph Knapper, A. S. R. Richards and Eli F. Townsend.

Jefferson, Patented Jacket.	Clearfield, Clearfield.	Geo. Scott, Geo. Scott.	Philpsburg, Philpsburg.	J. B. Scott, J. B. Scott.	Philpsburg, Philpsburg.	P. & N. Y. C. R. R. Pennsylvania Railroad.
Leland No. 1.	Clearfield.	E. E. Brubaker.	Smoke Run.			Pennsylvania Railroad.
Leland No. 2.	Clearfield.	E. E. Brubaker.	Smoke Run.			Pennsylvania Railroad.
Leland No. 3.	Clearfield.	E. E. Brubaker.	Smoke Run.			Pennsylvania Railroad.
Leland No. 4.	Clearfield.	E. E. Brubaker.	Smoke Run.			Pennsylvania Railroad.
Leland No. 5.	Clearfield.	E. E. Brubaker.	Smoke Run.			Pennsylvania Railroad.
Beach Creek Coal & Coke Co.	Clearfield.			J. L. Summerville.	Winburne.	New York Central R. R.
Forest No. 1.	Clearfield.			J. L. Summerville.	Winburne.	New York Central R. R.
Kyle.	Clearfield.			J. L. Summerville.	Winburne.	New York Central R. R.
Summerville No. 1.	Clearfield.			J. L. Summerville.	Winburne.	New York Central R. R.
W. A. Gould & Bro.	Clearfield.	W. A. Gould.	Brishin.	John Gould.	Brishin.	Pennsylvania Railroad.
Henderson No. 4.	Clearfield.	W. A. Gould.	Brishin.	Wm. Gates.	Brishin.	Pennsylvania Railroad.
Henderson No. 5.	Clearfield.	W. A. Gould.	Brishin.	Dani. Jones.	Brishin.	Pennsylvania Railroad.
McIntyre No. 1.	Clearfield.	W. A. Gould.	Brishin.	Wm. Phippington.	Brishin.	Pennsylvania Railroad.
McIntyre No. 2.	Clearfield.	W. A. Gould.	Brishin.		Brishin.	Pennsylvania Railroad.
McIntyre No. 3.	Clearfield.	W. A. Gould.	Brishin.	David Jones.	Brishin.	Pennsylvania Railroad.
Goss Run.	Clearfield.	W. A. Gould.	Brishin.		Brishin.	Pennsylvania Railroad.
II. Liveright	Clearfield.			Joseph Dugan.	Oseroda Mills.	Pennsylvania Railroad.
Fairmont No. 1.	Clearfield.			John Gaffey.	Oseroda Mills.	Pennsylvania Railroad.
Fairmont No. 2.	Clearfield.			James Locant.	McArthur.	Pennsylvania Railroad.
Fairmont No. 3.	Centre.			John Howard.	Oseroda Mills.	Pennsylvania Railroad.
Phoenix.	Clearfield.			Martin Dugan.	Oseroda Mills.	Pennsylvania Railroad.
Fairmont No. 4.	Clearfield.					
Fairmont No. 5.	Clearfield.					
Victoria Mining Co.	Clearfield.	J. C. Whittenburg.	11 Broadway.	Z. M. Miller.	Philpsburg.	New York Central R. R.
Acme No. 1.	Clearfield.	J. C. Whittenburg.	11 Broadway.	M. Miller.	Philpsburg.	New York Central R. R.
Acme No. 2.	Clearfield.	J. C. Whittenburg.	11 Broadway.	M. Miller.	Philpsburg.	New York Central R. R.
Acme No. 3.	Clearfield.	J. C. Whittenburg.	11 Broadway.	M. Miller.	Philpsburg.	New York Central R. R.
Acme No. 4.	Clearfield.	J. C. Whittenburg.	11 Broadway.	M. Miller.	Philpsburg.	New York Central R. R.
Acme No. 5.	Clearfield.	J. C. Whittenburg.	11 Broadway.	M. Miller.	Philpsburg.	New York Central R. R.
Ashtman & Ogdir Coal Co.	Clearfield.	J. Swires.	Philpsburg.	J. Swires.	Philpsburg.	New York Central R. R.
Bongas.	Clearfield.	J. Swires.	Philpsburg.	J. Swires.	Philpsburg.	New York Central R. R.
Chow.	Clearfield.	J. Swires.	Philpsburg.	J. Swires.	Philpsburg.	New York Central R. R.
Ogdir No. 1.	Centre.	J. Swires.	Philpsburg.	J. Swires.	Philpsburg.	New York Central R. R.
Henrietta Coal Mining Co.	Clearfield.	Geo. Lobb.	Brishin.			Pennsylvania Railroad.
Henrietta.	Clearfield.	Geo. Lobb.	Brishin.			Pennsylvania Railroad.
Prentiss.	Clearfield.	Geo. Lobb.	Brishin.			Pennsylvania Railroad.
Moridian.	Clearfield.	Geo. Lobb.	Brishin.			Pennsylvania Railroad.
Perin Colliery Co.	Clearfield.			Esack Hess.	Philpsburg.	Pennsylvania Railroad.
Fulton No. 1.	Clearfield.					

TABLE I—Continued.

Names of Operators and Col- lieries.	County.	Name of General Su- perintendent.	P. O. Address.	Name of Superin- tendent.	P. O. Address.	Railroad to Mine.
Falcon No. 1. Falcon No. 2.	Clearfield, Clearfield.			Frank Hess, Frank Hess.	Philipsburg, Philipsburg.	Pennsylvania Railroad. Pennsylvania Railroad.
Moshannon Coal Mining Co. Moshannon No. 1. Moshannon No. 2. Moshannon No. 3. Moshannon No. 4. Moshannon No. 5.	Clearfield, Clearfield, Clearfield, Clearfield, Clearfield, Clearfield.	C. H. Rowland, C. H. Rowland, C. H. Rowland, C. H. Rowland, C. H. Rowland, C. H. Rowland.	Houtzdale, Houtzdale, Houtzdale, Houtzdale, Houtzdale, Houtzdale.	J. M. Click, J. M. Click, J. M. Click, J. M. Click, J. M. Click, J. M. Click.	Houtzdale, Houtzdale, Houtzdale, Houtzdale, Houtzdale, Houtzdale.	Pennsylvania Railroad. Pennsylvania Railroad. Pennsylvania Railroad. Pennsylvania Railroad. Pennsylvania Railroad. A. & P. R. R.
G. L. Whitehead Coal Co. Standard No. 1. Standard No. 2. Standard No. 3. Standard No. 4. Standard No. 5.	Centre, Centre, Centre, Clearfield, Clearfield, Clearfield.	John Whitehead, John Whitehead, John Whitehead, John Whitehead, John Whitehead, John Whitehead.	6 S. 51st st., Phila., 6 S. 51st st., Phila., 6 S. 51st st., Phila., 6 S. 51st st., Phila., 6 S. 51st st., Phila., 6 S. 51st st., Phila.	Chas. W. Martin, Chas. W. Martin, Chas. W. Martin, Chas. W. Martin, Chas. W. Martin, Chas. W. Martin.	Houtzdale, Houtzdale, Houtzdale, Houtzdale, Houtzdale, Houtzdale.	Pennsylvania Railroad. Pennsylvania Railroad. Pennsylvania Railroad. Pennsylvania Railroad. Pennsylvania Railroad. Pennsylvania Railroad.
S. J. Mounitz. Whiteside No. 1. Whiteside No. 2. Gulick. Moran.	Clearfield, Clearfield, Clearfield, Clearfield, Clearfield.	S. J. Mounitz, S. J. Mounitz, S. J. Mounitz, S. J. Mounitz, S. J. Mounitz.	Moran, Moran, Moran, Moran, Moran.			Pennsylvania Railroad. Pennsylvania Railroad. Pennsylvania Railroad. Pennsylvania Railroad. Pennsylvania Railroad.
Jas. F. Stott. Ophir Nos. 2, 3, 4 and 5.	Centre.	Jas. F. Stott.	Philipsburg.	Jas. F. Stott.	Philipsburg.	New York Central R. R.
H. W. Wortz & Co. Franklin. Axtell. Tammess. Standard No. 8.	Clearfield, Clearfield, Clearfield, Clearfield, Clearfield.	H. W. Wortz, H. W. Wortz, H. W. Wortz, H. W. Wortz, H. W. Wortz.	Houtzdale, Houtzdale, Houtzdale, Houtzdale, Houtzdale.			Pennsylvania Railroad. Pennsylvania Railroad. Pennsylvania Railroad. Pennsylvania Railroad. Pennsylvania Railroad.
Batz Coal Mining Co. and Swamp Coal Co. Batz No. 1. Batz No. 2. Batz No. 3. Batz No. 4.	Clearfield, Clearfield, Clearfield, Clearfield, Clearfield.	H. B. Swcope, H. B. Swcope, H. B. Swcope, H. B. Swcope, H. B. Swcope.	Madera, Madera, Madera, Madera, Madera.	John Stevenson, Thos. Richardson, Geo. Granville.	Bolsena Mills, Bolsena, Bolsena Mills.	Pennsylvania Railroad. Pennsylvania Railroad. Pennsylvania Railroad. Pennsylvania Railroad. Pennsylvania Railroad.
L. Milton Wilson. Schwinn. Union No. 4. Bear Run.	Clearfield, Centre, Clearfield, Centre.	L. Milton Wilson, L. Milton Wilson, L. Milton Wilson, L. Milton Wilson.	Houtzdale, Houtzdale, Houtzdale, Houtzdale.			A. & P. R. R. Pennsylvania Railroad. Pennsylvania Railroad. Pennsylvania Railroad.

H. M. Hughes, Leader No. 1, Leader No. 2, Logan Ridge,	Clearfield, Clearfield,	H. M. Hughes, H. M. Hughes, H. M. Hughes,	Drane, Drane, Drane,	..... ..... .....	Pennsylvania Railroad, Pennsylvania Railroad, Pennsylvania Railroad.
J. R. Brown, Osceola No. 2, Royal Niagara,	Centre, Clearfield, Clearfield,	J. R. Brown, J. R. Brown, J. R. Brown,	Osceola Mills, Osceola Mills, Osceola Mills,	Wigton, Houtzdale, Osceola Mills,	Pennsylvania Railroad, Pennsylvania Railroad, Pennsylvania Railroad.
Thos. C. Helms & Co., Lewistown, Electric,	Clearfield, Centre,	Thos. C. Helms, Thos. C. Helms,	Osceola Mills, Osceola Mills,	West Manchester, Osceola Mills,	Pennsylvania Railroad, Pennsylvania Railroad.
Thos. J. Lee, Lewistown, DAVE,	Clearfield, Clearfield,	L. J. Lee, L. J. Lee,	Phillipsburg, Phillipsburg,	Phillipsburg, Harris Run,	New York Central R. R., New York Central R. R.
M. & P. Craig, Sterling No. 1, Sterling No. 2,	Clearfield, Clearfield,	M. Craig, M. Craig,	Brishin, Brishin,	Brishin, Brishin,	Pennsylvania Railroad, Pennsylvania Railroad.
Harrison-Walker Co., Platts, Varnet,	Clearfield, Clearfield,	H. H. Errett, H. H. Errett,	Woodland, Woodland,	Woodland, Woodland,	Pennsylvania Railroad, Private tram road.
Brown & Dyer, Union No. 3, Union No. 6,	Centre, Centre,	A. Brown, A. Brown,	Osceola Mills, Osceola Mills,	..... .....	Pennsylvania Railroad, Pennsylvania Railroad.
O. L. Schoonover, Forest No. 1, Forest No. 2,	Clearfield, Clearfield,	O. L. Schoonover, O. L. Schoonover,	Munsons, Munsons,	Munsons, Munsons,	New York Central R. R., New York Central R. R.
American Union Coal Co., Mt. Vernon No. 7, Mt. Vernon No. 10,	Clearfield, Clearfield,	Geo. L. Cant, Geo. L. Cant,	Huntington, Huntington,	Huntington, Huntington,	Pennsylvania Railroad, A. & P. C. R. R.
Ghem, Ghem Coal Co.,	Centre,	.....	.....	Osceola Mills,	Pennsylvania Railroad.
Delah Coal Co., Webster No. 1,	Clearfield,	Jas. H. Minds,	Ramey,	Ramey,	Pennsylvania Railroad.
John J. & H. W. Todd, Lane Nos. 1, 2 and 3, Elsworth & Dunham Royal,	Clearfield, Clearfield,	John T. Todd,	Phillipsburg, .....	..... Phillipsburg,	New York Central R. R., New York Central R. R.
Adams & Co., Jefferson	Clearfield,	Geo. B. Friday,	Wheatbur,	Phillipsburg,	Pennsylvania Railroad.

TABLE I—Continued

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Penn Iron Co., Ltd. Reading.	Clearfield,	C. H. Burrowes, ..	Lancaster,	C. Meagher,	Osceola Mills, ...	Pennsylvania Railroad.
Osceola Coal and Coke Co. Union No. 3.	Centre,	Albert S. Brown, ...	Osceola Mills, ..	.....	.....	Pennsylvania Railroad.
E. J. Walker & Co. Troy.	Clearfield,	E. J. Walker,	Bristlin, .....	.....	.....	Pennsylvania Railroad.
C. D. Loraine. West Meshannon.	Clearfield,	C. D. Loraine,	Phillipsburg,	Benj. Badman, ...	Houtzdale,	A. & P. C. R. R.
Lawton & Cox. White Oak No. 1.	Clearfield,	E. E. Lawton,	Madera,	E. E. Lawton, ...	Madera,	Pennsylvania Railroad.
Clearfield Lumber Co. Alder Run.	Clearfield, .....	.....	.....	Guy Snyder,	Clearfield,	New York Central R. R.
W. F. Holt. Phoenix.	Clearfield,	W. F. Holt,	Phillipsburg,	Edward Kelley, ..	Phillipsburg,	New York Central R. R.
Stratton Bros. Kentuck.	Clearfield,	John Stratton,	Phillipsburg, .....	.....	.....	Pennsylvania Railroad.
Brown & Reeves. Star No. 1.	Clearfield,	Albert S. Brown, ..	Osceola Mills, .....	.....	.....	Pennsylvania Railroad.
Meadowbrook Mining Co. Meadowbrook.	Clearfield,	Geo. H. Huddle,	519 & 521 N. Amer. Bldg., Phila.	R. M. Miller,	West Decatur, ...	Pennsylvania Railroad.
Hillings, Morgan & Co. Porter Run.	Clearfield,	Thos. H. Morgan, ..	McCartney,	Thos. H. Morgan, ..	McCartney,	Pennsylvania Railroad.
John Walton & Son. London.	Clearfield,	John Walton,	Phillipsburg,	John Walton,	Phillipsburg,	Pennsylvania Railroad.
J. M. Roberson. Roberson.	Clearfield,	J. M. Roberson,	Baccaria, .....	.....	.....	Pennsylvania Railroad.
Townsend & Milson. Shoff No. 2.	Clearfield,	E. F. Townsend,	Phillipsburg,	E. F. Townsend, ..	Phillipsburg,	Pennsylvania Railroad.

Beaver Run Coal Co. Beaver Run,.....	S. Nelson,.....	Phillipsburg,.....	S. Nelson,.....	Phillipsburg,.....	Pennsylvania Railroad.
J. R. Flenner & Co. Standard No. 4,.....	Dan. Campbell,....	Smoke Run,.....	.....	.....	Pennsylvania Railroad.
Mapleton Coal Co. Mapleton,.....	Geo. S. Moyer,.....	Osceola Mills,.....	.....	.....	Pennsylvania Railroad.
Wm. Casker. Birds Eye,.....	Wm. Casker,.....	Houtzdale,.....	.....	.....	.....
Stanley Coal Co. Stanley No. 2,.....	T. W. Thompson,....	Phillipsburg,.....	T. W. Thompson,....	Phillipsburg,.....	Pennsylvania Railroad.
S. V. Davis & Co. Mt. Vernon No. 9,....	S. V. Davis,.....	Baccaria,.....	S. V. Davis,.....	Baccaria,.....	Pennsylvania Railroad.
Lincoln Coal Co. Lancashire No. 2,....	C. F. Frazier,.....	Altoona,.....	T. C. Harding,....	Osceola Mills,....	Pennsylvania Railroad.
W. G. Fishburn. Kehler,.....	W. G. Fishburn,....	Munsons,.....	.....	.....	New York Central R. R.
Douglas,.....	W. G. Fishburn,....	Munsons,.....	.....	.....	New York Central R. R.
Stett, Hill & Lyle. Kentuck,.....	Jas. F. Stott,.....	Phillipsburg,.....	Jas. F. Stott,.....	Phillipsburg,.....	Pennsylvania Railroad.
Thos. Blythe. Alexandra,.....	Thos. Blythe,.....	Madera,.....	Thos. Blythe,.....	Madera,.....	Pennsylvania Railroad.
Californida,.....	Thos. Blythe,.....	Madera,.....	Thos. Blythe,.....	Madera,.....	Pennsylvania Railroad.
Pennsylvania,.....	Thos. Blythe,.....	Madera,.....	Thos. Blythe,.....	Madera,.....	Pennsylvania Railroad.
J. W. Hooten. Black Diamond,.....	J. W. Hooten,.....	Munsons,.....	J. W. Hooten,.....	Munsons,.....	New York Central R. R.
Hearts Mine,.....	J. W. Hooten,.....	Munsons,.....	John Hart,.....	Munsons,.....	New York Central R. R.
Hope,.....	Jonas Andra,.....	Erishin,.....	Jonas Andra,.....	Erishin,.....	Pennsylvania Railroad.
Andra Coal Co. Creskape Mining Co. Creskape No. 1,.....	R. L. Scott,.....	Phillipsburg,.....	R. L. Scott,.....	Phillipsburg,.....	Pennsylvania Railroad.
Powerton Coal Mfg. Co. Powerton No. 1,.....	P. Gallagher,.....	Osceola Mills,.....	Thos. Duggan,....	Osceola Mills,....	Pennsylvania Railroad.
Isaac Reese Sons' Co. Reese Nos. 1 and 2,....	.....	.....	Chas. Rollen,....	Erishin,.....	Pennsylvania Railroad.
John Barnes & Sons. Lancashire Nos. 2 and 3,....	Jos. Barnes,.....	Phillipsburg,.....	Jos. Barnes,.....	Phillipsburg,.....	Pennsylvania Railroad.
John Tyler & Son. .....	.....	.....	.....	.....	Pennsylvania Railroad.

TABLE I—Continued.

Names of Operators and Col- leries.	County.	Name of General Su- perintendent.	P. O. Address.	Name of Superin- tendent.	P. O. Address.	Railroad to Mine.
John G. Platt & Co. Cuba Nos. 2 and 3, Cuba Nos. 1 and 2, Colorado Nos. 1 and 2,	Clearfield..... Clearfield..... Clearfield.....	Wm. Powel, Jr., Wm. Powel, Jr., Wm. Powel, Jr.,	Phillipsburg, Phillipsburg, Phillipsburg, .....	..... ..... .....	..... ..... .....	New York Central R. R. Pennsylvania Railroad. Pennsylvania Railroad.
Blair Bros. Orient Nos. 2 and 3,	Centre,.....	C. F. Blair,	Tyrone, P. A.,	L. B. Blair,	Powelson, P. A.,	Pennsylvania Railroad.
Samuel Styre, Black Diamond No. 2,	Clearfield,.....	Saml. Styre,	Philadelphia, .....	.....	.....	Pennsylvania Railroad.

TABLE II.—Gives the total number of tons of coal mined and tons of coke produced in each colliery, number of days worked, number of employees, number of employees killed and injured, number of kegs of powder, etc., used in the Eighth Bituminous District for the year ending December 31, 1902.

Names of Operators and Collieries.		County.	
Berwind-White Coal Mining Co.			
Atlantic No. 1.	Clearfield.	74,253	6,783
Eureka No. 2.	Clearfield.	45,552	5,767
Eureka No. 4.	Clearfield.	104,793	3,996
Eureka No. 16.	Clearfield.	38,610	2,296
Eureka No. 18.	Clearfield.	2,824	16
Eureka No. 19.	Clearfield.	26,184	1,195
Eureka No. 22.	Clearfield.	88,712	2,238
Eureka No. 27.	Clearfield.	14,156	766
Eureka No. 27.	Clearfield.	44,357	265
Eureka No. 28.	Clearfield.	17,052	2,353
Totals.		516,768	20,515
Morrisdale Coal Mining Co.			
Morrisdale No. 1.	Clearfield.	173,299	8,978
Morrisdale No. 2.	Clearfield.	111,408	3,573
Morrisdale No. 3.	Clearfield.	5,448	1,623
Morrisdale No. 6.	Clearfield.	11,128	
Mabel	Clearfield.	3,713	
Tracy Nos. 1 and 2.	Clearfield.	18,255	
Tracy No. 4.	Clearfield.	18,877	
Mudora No. 1.	Clearfield.	3,137	
Totals.		322,332	11,564
Shipments of coal in tons by rail or otherwise.			
Number of tons used for steam and heat at colliery.			
Sold to local trade and used by employees—tons.			
Total production of coal in tons.			
Total production of coke in tons.			
Number of coke ovens.			
Number days worked.			
Number persons employed.			
Number fatal accidents.			
Number non-fatal accidents.			
Number kegs powder used.			
Number pounds of dynamite used.			
Number horses and mules.			

*Totals in this column are averages.

†New mine.

TABLE II—Continued.

Names of Operators and Collieries.		County.		Shipments of coal in tons by rail or otherwise.		Number of tons used for steam and heat at colliery.		Sold to local trade and used by employees—tons.		Total production of coal in tons.		Total production of coke in tons.		Number of coke ovens.		Number days worked.		Number persons employed.		Number fatal accidents.		Number non-fatal accidents.		Number keps powder used.		Number pounds of dynamite used.		Number horses and mules.		
Peale, Peasock & Kerr, Inc.				Clearfield.	47,478	.....	.....	.....	.....	47,478	.....	.....	.....	.....	.....	.....	236	58	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Deatur No. 1.				Clearfield.	52,644	.....	.....	.....	.....	52,644	.....	.....	.....	.....	.....	.....	236	61	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Deatur No. 2.				Clearfield.	169,763	.....	.....	.....	.....	169,763	.....	.....	.....	.....	.....	.....	240	221	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Deatur Nos. 3 and 6.				Clearfield.	25,522	.....	.....	.....	.....	25,522	.....	.....	.....	.....	.....	.....	216	34	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Deatur No. 4.				Clearfield.	188,285	.....	.....	.....	.....	188,285	.....	.....	.....	.....	.....	.....	245	245	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ogle No. 1.				Clearfield.	50,372	.....	.....	.....	.....	50,372	.....	.....	.....	.....	.....	.....	273	48	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ogle No. 5.				Clearfield.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals.				Clearfield.	544,074	3,301	1,009	.....	.....	548,444	.....	.....	.....	.....	.....	.....	243	690	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Booth Creek Coal and Coke Co.				Clearfield.	223,319	1,795	1,263	.....	.....	226,107	.....	.....	.....	.....	.....	.....	272	243	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Summersville No. 8.				Clearfield.	87,832	195	.....	.....	.....	88,047	.....	.....	.....	.....	.....	.....	250	119	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Forest Nos. 1 and 2.				Clearfield.	92,333	.....	.....	.....	.....	92,363	.....	.....	.....	.....	.....	.....	200	102	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals.				Clearfield.	403,504	1,795	1,458	.....	.....	406,757	.....	.....	.....	.....	.....	.....	244	464	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Henry Liveright.				Clearfield.	42,315	.....	.....	.....	.....	42,355	.....	.....	.....	.....	.....	.....	242	73	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fairmount No. 2.				Clearfield.	6,570	.....	.....	.....	.....	6,570	.....	.....	.....	.....	.....	.....	188	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fairmount No. 3.				Clearfield.	20,151	.....	.....	.....	.....	20,191	.....	.....	.....	.....	.....	.....	119	52	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fairmount No. 4.				Clearfield.	682	.....	.....	.....	.....	682	.....	.....	.....	.....	.....	.....	25	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fairmount Nos. 5 and 6.				Centre.	26,291	.....	.....	.....	.....	26,291	.....	.....	.....	.....	.....	.....	315	36	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Phoenix.				Centre.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals.				Centre.	95,809	.....	.....	.....	.....	95,909	.....	.....	.....	.....	.....	.....	148	182	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Irish Bros.				Clearfield.	52,020	.....	.....	.....	.....	52,103	.....	.....	.....	.....	.....	.....	204	66	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Baltic Nos. 1 and 2.				Clearfield.	11,467	.....	.....	.....	.....	11,467	.....	.....	.....	.....	.....	.....	136	57	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Caledonia Nos. 1 and 2.				Clearfield.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

*Totals in this column are averages.

†New mine.

Colorado Nos. 3 and 4,	Clearfield,	44,028	896	202	45,126			272	97		429	7
Colorado No. 5,	Clearfield,	61,779		95	64,874			194	151		334	8
Cuba Nos. 1 and 2,	Clearfield,	12,620			12,620			162	47		34	6
Gulen,	Clearfield,	12,570		27	12,597			118	61		82	6
Geahart,	Clearfield,	7,800		1	42,965			176	86	1	500	7
Jefferson,	Clearfield,	23,903		336	37,429			49	35		16	4
Red Jacket,	Clearfield,							252	48	1	408	4
Totals,		277,271	896	761	277,925			174	648	2	2,487	60
Cambria Coal Mining Co												
Leland No. 1,	Clearfield,	40,701	226	1,344	42,271			201	143		500	11
Leland No. 2,	Clearfield,	9,318			9,318			119	33		29	15
Leland No. 3,	Clearfield,	5,040			5,040			113	20		13	12
Leland No. 6,	Clearfield,	25,865			25,865			166	47		89	50
Totals,		80,924	226	1,344	82,494			149	243		631	427
W. A. Gould & Bro.												
Henderson No. 4,	Clearfield,	7,605		11	7,706			209	9			
Henderson No. 5,	Clearfield,	12,220	22		12,242			238	26			
Midvale No. 1,	Clearfield,	18,973	11	22	19,006			244	39		76	
Midvale No. 2,	Clearfield,	15,489	17		15,506			224	26		75	
Reakirt Bros. & Co., W. A. Gould, Con- tractor,												
Lorain,	Clearfield,	27,247		56	27,103			181	43		110	4
Goss Run,	Clearfield,	5,175			5,175			182	9			1
Totals,		86,800	50	89	86,939			21	137		311	18
Victoria Mining Co.												
Acme Nos. 1 and 2,	Clearfield,	116,051	4,001	272	120,324			242	174	1	735	27
Acme No. 3,	Clearfield,	633			623			85	4		40	
Acme No. 5,†	Clearfield,	824			824			90	37		50	
Acme No. 6,†	Clearfield,	344			344			55	9		15	
Totals,		147,842	4,001	272	152,115			112	224	1	840	27
Ashman & Ophir Coal Co.												
Ophir No. 1,	Centre,	54,394			54,394			237	56		409	10
Ashman,	Clearfield,	49,706			49,706			211	68		24	10
Ghem,	Clearfield,	48,587	456	15	49,108			23	66		360	10
Royal,	Clearfield,	6,331	168		6,499			31	58		509	10
Totals,		158,918	624	15	159,217			185	218		784	509
Henrietta Coal Co., Ltd.												
Henrietta,	Clearfield,	39,088		112	39,200			258	61	1	47	75

*Totals in this column are averages.

†New mine.

TABLE II—Continued.

Names of Operators and Collieries.	County.	Shipments of coal in tons by											Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Total production of coke in tons.	Number of coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
		rail or otherwise.	by express.	by water.	by pipeline.	by other means.	by other means.	by other means.	by other means.	by other means.	by other means.	by other means.												
Friendship, Meridian,	Clearfield,	11,240												13		11,240			150	16				4
Totals,	Clearfield,	2,46												125		309			85	15			50	3
Penn Collieries Co.																								
Falcon No. 1,	Clearfield,	16,270														16,270			151	21				
Falcon No. 2,	Clearfield,	44,310												82		44,310			202	53				
Falcon No. 3,	Clearfield,	9,301											8		9,309			238	54					
Totals,	Clearfield,	70,081											90		70,423			197	138					18
Moshannon Coal Mining Co.																								
Moshannon No. 1,	Clearfield,	25,526														25,526			286	30				6
Moshannon No. 2,	Clearfield,	13,569														13,569			280	15		150		2
Moshannon No. 3,	Clearfield,	10,124														10,124			237	9		100		3
Moshannon No. 4,	Clearfield,	3,423											56		3,479			50	9			50		3
Moshannon No. 7, 4,	Clearfield,	959													959			55	9			10		3
Totals,	Clearfield,	53,572											56		53,628			182	72			315		15
G. L. Whitehead Coal Co.																								
Standard No. 1,	Centre,	27,317														27,317			246	42			625	4
Standard No. 2,	Centre,	5,023													5,023			150	11			236		4
Standard No. 3,	Centre,	18,960													18,960			246	15			22		3
Standard No. 4,	Clearfield,	540													540			31	10			17		1

*Totals in this column are averages.

†New mine.

Standard No. 7.	Clearfield.	6,885		6,885		180	28		67	276
Standard No. 9.	Clearfield.	2,248		2,248		171	12		12	
Totals,		61,003				172	117		436	901
S. J. Mountz.										
Whiteside No. 1,	Clearfield.	9,075		9,075		216	9			
Whiteside No. 2,	Clearfield.	10,398		10,398		217	9			
Gulick,	Clearfield.	8,353		8,353		223	9			
Moran,	Clearfield.	5,696		5,696		168	9			
Totals,		33,522		33,522		206	36			
H. W. Wortz & Co.										
Franklin, f	Clearfield.	9,520		9,520		220	19			
Arctic,	Clearfield.	8,456		8,456		195	11		55	
Dauntless,	Clearfield.	2,688		2,688		150	8		25	
Standard No. 8,	Clearfield.	2,016		2,016		90	8		30	
Totals,		22,680		22,680		164	46		110	
Betz Mining Co. and Swoope Coal Co.										
Betz colliery No. 1,	Clearfield.	54,940	40	54,993		156	105		611	
Betz colliery No. 2,	Clearfield.	31,923	30	31,980		241	87		489	
Betz colliery No. 18,	Clearfield.	22,778	13	22,819		136	47		89	
Totals,		109,641	83	109,792		174	233		1,189	
L. Milton Wilson.										
Schwinn,	Clearfield.	20,253		20,253		215	32		65	
Union No. 4,	Clearfield.	2,693		2,704		82	6		11	
Bear Run,	Centre.	12,666		12,686		156	28			
Totals,		35,632		35,675		151	66		76	
H. M. Hughes.										
Leader No. 1,	Clearfield.	12,442		12,442		193	22		100	
Leader No. 2,	Clearfield.	6,100		6,100		139	6		16	
Logan Ridge,	Clearfield.	6,272		6,272		147	11			
Totals,		24,874		24,886		169	39		110	
J. R. Brown.										
Geocela No. 3,	Centre.	15,513	500	16,022		157	40			
Royal,	Clearfield.	2,900		2,918		108	10			
Niagara,	Clearfield.	2,946	156	3,102		115	8			
Totals,		21,449	893	22,342		127	58			

*Totals in this column are averages.

†New mine.

O. L. Schoonover.	Forest No. 1,	Clearfield,	8,557	134	8,691	82	82	2	78	5
	Forest No. 2,	Clearfield,	7,119			76	81		64	4
	Totals,		15,706	134	15,840	79	173	2	142	9
American Union Coal Co.	Mt. Vernon No. 1,	Clearfield,	11,169		11,169	282	24	1	35	3
	Mt. Vernon No. 1 [†] ,	Clearfield,	31		31	49	6		8	150
	Totals,		11,200		11,200	165	30	1	43	4
W. G. Fishburn	Kyle,	Clearfield,	6,374	94	6,468	26	124		27	17
	Douglas,	Clearfield,	2,981	18	2,999	89	46		12	2
	Totals,		9,355	112	9,467	57	170		39	19
Thomas Blythe.	Alexander,	Clearfield,	35,564	224	35,939	253	49		240	5
	California, [‡]	Clearfield,	336			41	9		12	1
	Pennsylvania,	Clearfield,	26,645		26,645	75	84	1	100	9
J. W. Hooten	Totals,		62,545	224	62,961	123	142	1	352	15
Black Diamond.	Hart's mine, [†]	Clearfield,	19,774	51	19,825	64	63		300	6
		Clearfield,	5,268		5,268	119	17		75	2
	Totals,		25,042	51	25,093	91	80		375	8
John C. Platt	Cuba Nos. 2 and 3,	Clearfield,	1,299	7	1,306	16	21			3
	Clifton,	Clearfield,	1,142	6	1,148	20	15			4
	Colorado Nos. 1 and 2,	Clearfield,	671		1,671	12	21			4
Totals,			3,112	13	3,125	16	57			11

*Totals in this column are averages.

†New mine.

Recapitulation.

Borwick-White Coal Mining Co.	Clearfield,	516,723	29,315	1,238	541,756	166	829	5	968	105
Morrisdale Coal Mining Co.	Clearfield,	255,325	14,194	1,367	492,801	174	585	4	3,373	56
Peale, Peacock & Keay, Inc.	Clearfield,	504,671	3,361	1,069	548,141	242	690	4	4,425	34
Beach Creek Coal and Coke Co.	Clearfield,	95,891	1,797	1,138	406,537	244	434	2	3,330	41
Henry Liveright,	Clearfield & Centre,	276,271	8,6	161	277,328	168	182		3,479	30
Fish Bros.,	Clearfield,					174	648	2	2,487	66

TABLE II—Continued.

Names of Operators and Collieries.	County.	Shipments of coal in tons by		Number and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in		Total production of coke in	tons.	Number of coke ovens.		Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds dynamite used.	Number horses and mules
		rail or otherwise.	by water.			tons.	tons.			Number.	Number.						
Cambria Coal Mining Co.,	Clearfield.	80,824		226	1,344	82,404						243			631	427	18
W. A. Gould & Bro. and Reakirt Bros. & Co.	Clearfield.	86,809		50	89	86,809						213			311		18
Victoria Mining Co.,	Clearfield.	147,842		4,001	272	147,842						112	1		840		27
Ashman & Oliphant Coal Co.,	Clearfield & Centre.	158,878		624	15	159,217						224			784	300	40
Henrietta Coal Co., Ltd.,	Clearfield.	50,384			125	50,709						175		1	55	125	18
Penn. Collieries Co.,	Clearfield.	70,081		252	90	70,423						197					
Moshannon Coal Mining Co.,	Clearfield.	53,372			56	53,628						182			315		15
G. L. Whitehead Coal Co.,	Clearfield & Centre.	91,005				91,963						172			436	901	13
S. J. Mountz,	Centre.	23,212				23,322						206			115	500	4
Jas. F. Scott,	Clearfield.	33,216		28	28	33,275						240			110		4
H. W. Wortz & Co.,	Clearfield.	22,680				22,680						164					9
Leitz Coal Mining Co. and Swoope Coal Mining Co.,	Clearfield.	109,641		83	68	109,792						174			1,189		16
I. Milton Wilson,	Clearfield & Centre.	35,632			43	35,675						151			76		12
J. M. Hughes,	Clearfield.	24,874			112	24,886						160			110		8
J. R. Brown,	Clearfield & Centre.	21,449		893		22,312						127					6
Thomas C. Helms & Co.,	Clearfield & Centre.	115,703				115,703						271			475		23
Thos. J. Lee,	Clearfield.	53,238		56	33	53,624						214			190		6
M. & F. Craig,	Clearfield.	40,320				40,320						189			150		6
Harrison-Walker Co.,	Clearfield.	34,258		588		34,846						279			401		6
Brown & Dyck,	Centre.	23,699				23,699						178					10
O. L. Schoenover,	Clearfield.	15,706			134	15,800						79			112		9
American Coal Co.,	Clearfield.	11,290				11,290						105			33	400	4
Cheney Coal Co.,	Centre.	70,310			334	70,444						115		1	326		8
Butch Coal Co.,	Clearfield.	74,483		278		74,483						117			389	1,900	20
John J. & H. W. Todd,	Clearfield.	41,324			484	41,324						106					12
Stewart & Dunham,	Clearfield.	34,186		746	80	34,186						106		2	100		11
Penn. Iron Co., Ltd.,	Clearfield.	23,146		162	62	23,370						211			150		7
Oswesha Coal and Coke Co.,	Centre.	21,158				21,158						189			153		5
E. J. Walker & Co.,	Clearfield.	17,561		112		17,675						249			240	200	2
C. D. Loraine,	Clearfield.	16,192				16,192						157					4

Lawton & Cox.	Clearfield.	16,384	24	15,464	16,404	29	168	29	130	300	6
Clearfield Lumber Co., Ltd.	Clearfield.	14,951	71	15,964	15,964	28	28	28	97	10	1
W. F. Holt.	Clearfield.	11,274		11,264	11,264	16	16	16			1
Stratton Bros.	Clearfield.	10,301		10,324	10,324	17	17	17			1
Brown & Reeves.	Clearfield.	9,835	113	9,968	9,968	10	10	10	90		1
Meadow Brook Mining Co.	Clearfield.	8,969	58	9,017	9,017	294	294	294	40		1
Hilling & Morgan.	Clearfield.	7,956		7,918	7,918	1	1	1	75		1
John Walton & Son.	Clearfield.	6,662		6,684	6,684	10	10	10	20		1
Al. Johnson.	Clearfield.	6,257		6,257	6,257	22	22	22	15		1
Thompson & Millam.	Clearfield.	5,125		5,125	5,125	10	10	10	15		1
Beckwith & Co.	Clearfield.	5,122		5,122	5,122	224	224	224	15		1
J. R. Phelan & Co.	Clearfield.	5,042		5,042	5,042	184	184	184	60		1
Mapleton Coal Co.	Clearfield.	5,042		5,042	5,042	139	139	139	20		1
Wm. Cusker.	Clearfield.	3,940	123	3,940	3,940	12	12	12	20	25	1
Stanley Coal Co.	Clearfield.	3,940	123	3,940	3,940	12	12	12	10		1
S. V. Davis & Co.	Clearfield.	3,120	1	3,120	3,120	35	35	35	25		1
Line In Coal Co.	Clearfield.	1,536		1,536	1,536	40	40	40	35	50	1
W. G. Fishburn.	Clearfield.	9,335	112	9,447	9,447	17	17	17	30		1
Scott, Hill & Dale.	Clearfield.	5,700		5,600	5,600	43	43	43	30		1
Thos. Haythe and Penn'a Coal and Coke Co.	Clearfield.	62,575	224	62,901	62,901	123	123	123	3		1
J. W. Hooten.	Clearfield.	25,082	51	25,082	25,082	51	51	51	32		1
Anda & Co.	Clearfield.	7,258		7,258	7,258	82	82	82	32		1
Compagnie Mining Co.	Clearfield.	37,860		37,860	37,860	22	22	22	75		1
Powellton Coal Mining Co.	Centre.	17,980		17,987	17,987	216	216	216	84		1
Isaac Rosco Sons Co.	Centre.	19,510		19,510	19,510	27	27	27	84		1
John Tyler & Sons.	Clearfield.	13,108	874	13,768	13,768	176	176	176	250		1
John G. Platt.	Clearfield.	3,112	13	3,125	3,125	37	37	37			1
Blair Bros.	Centre.	77,247	112	77,247	77,247	163	163	163	400		1
Samuel Styre.	Clearfield.	8,961		8,961	8,961	17	17	17			1
Grand totals.		4,245,594	56,134	4,376,762	4,376,762	106	102	7,404	20,781	12,688	898

TABLE III.—Showing the number of each class of employees at each colliery in the Eighth Bituminous District during the year 1902.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.										Grand total inside and outside.
		Mine foremen.	Assistant mine foremen.	Miners.	Machine runners.	Machine loaders.	Machine scrapers.	Drivers and runners.	Team boys and helpers.	Company men.	All other employes.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	Coke employes.	Bookkeepers and clerks.	All other employes.	Total outside.		
Berwind-White Coal Mining Co.																						
Atlantic No. 1.	Clearfield	1		91				6	2	2	9	111				4				11	122	
Clearfield No. 1.	Clearfield	1		63				3		1	1	70				3				3	79	
Eureka No. 5.	Clearfield	1		126				4	4	7	2	145				1				4	156	
Eureka No. 7.	Clearfield	1		49				1		1		58				1				1	62	
Eureka No. 16.	Clearfield	1		12				1	1	1		16				1				1	17	
Eureka No. 18.	Clearfield	1		36				2		1		43				1				2	48	
Eureka No. 20.	Clearfield	1		99				3	1	2	3	114				1				3	123	
Eureka No. 22.	Clearfield	1		31				2		1		35				1				3	38	
Eureka No. 24.	Clearfield	1		75				4	1	2	9	82				3				1	94	
Eureka No. 27.	Clearfield	1		75				6				82				1				1	83	
Eureka No. 28.	Clearfield	1		75				6				82				1				1	83	
Totals.		10	2	582	6	53	6	35	10	20	30	754	16	21	12	19	68	822	11	122		
Morrisdale Coal Mining Co.																						
Morrisdale No. 1.	Clearfield	1		69	8	39	8	19	6	22		224	1	1	5	9	40	6	15	77	301	
Morrisdale No. 2.	Clearfield	1		13	4	70	4	6	3	10		112	1	1	3	4			2	10	122	
Morrisdale No. 3.	Clearfield	1			3	25	3	2		12	1	47	1	1	3	4			2	9	56	
Morrisdale No. 6.	Clearfield	1		17								20							1	1	21	
Mabel.	Clearfield	1		14				1	1			16							1	1	17	
Troy Nos. 1 and 2.	Clearfield	1		14				1		2		18							1	1	19	
Troy No. 4.	Clearfield	1		12				1			1	15							1	1	16	
Madera No. 1.	Clearfield	1		20	2		2	1	3		1	26			3				5	1	33	
Totals.		8	3	150	15	194	17	21	12	46	2	478	1	2	13	17	40	6	28	107	585	

TABLE III.—Continued.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.										Grand total inside and outside.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
		Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
		Mine foremen.	Assistant mine foremen.	Miners.	Machine runners.	Machine loaders.	Machine scrapers.	Drivers and runners.	Boor boys and helpers.	Company men.	All other employes.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	Wreck employes.	Bookkeepers and clerks.	All other employes.	Total outside.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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Niagara.	Clearfield.	T		1	S	8
Totals,		38		5	2	48
Thos. C. Heims,						
Jenore, Electric,	Clearfield Centre,	69 70		5	1	68
Totals,		124		11	1	150
Thos. J. Lee,						
Lee Colliery, Davis,	Clearfield Clearfield,	24 23		2 3	2	39 28
Totals,		47		5	3	67
M. & F. Craig,						
Sterling No. 2,	Clearfield,	12		2		15
Stirling No. 3,	Clearfield,	33		2		37
Totals,		45		4	1	52
Harrison-Walker Co.,						
Pine, Varior,	Clearfield Clearfield,	17 22		1		19
Totals,		39		2		43
Brown & Dyer,						
Union No. 5,	Centre,	20		3		24
Union No. 6,	Centre,	27		3		31
Totals,		47		6		55
O. L. Schoonover,						
Forest No. 1,	Clearfield,	55		4	6	86
Forest No. 2,	Clearfield,	70		3	5	79
Totals,		145		7	11	165
American Union Coal Co.,						
Mt. Vernon No. 7,	Clearfield,	16		2	1	22
Mt. Vernon No. 10,	Clearfield,	4				4
Totals,		20		2	1	26
Ghem Coal Co.,						
Ghem,	Centre,	102		7		3
Fatab Coal Co.,						
Webster No. 4,	Clearfield,	81		7	6	106
John J. & H. W. Todd Lane Nos. 1, 2 and 3,	Clearfield,	80		4	1	3
						89
						1
						4
						7
						96

TABLE III—Continued.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.										Grand total inside and outside.
		Mine foremen.	Assistant mine foremen.	Miners.	Machine runners.	Machine loaders.	Machine scrapers.	Drivers and runners.	Door boys and helpers.	Company men.	All other employes.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	Coke employes.	Bookkeepers and clerks.	All other employes.	Total outside.		
Elsworth & Dunham.	Clearfield...	1	1	169	.....	.....	.....	5	.....	3	.....	118	1	1	3	3	1	1	.....	7	125
Royal,	Clearfield...	1	1	54	.....	.....	.....	2	.....	.....	.....	57	1	1	1	.....	1	1	.....	3	60
Jefferson,	Clearfield...	1	1	21	.....	.....	.....	2	1	2	.....	27	1	1	1	.....	.....	.....	.....	2	29
Reading,	Clearfield...	1	1	37	.....	.....	.....	4	.....	2	.....	44	1	1	.....	.....	.....	.....	.....	1	45
Union No. 2,	Centre,	1	1	22	.....	.....	.....	2	.....	1	.....	26	1	1	1	.....	1	.....	.....	3	29
Troy,	Clearfield...	1	1	39	.....	.....	.....	2	.....	.....	.....	33	1	1	.....	.....	.....	.....	.....	1	34
West Moshannon,	Clearfield...	1	1	20	.....	.....	.....	2	.....	2	.....	27	1	1	.....	.....	1	.....	.....	2	29
White Oak No. 1,	Clearfield...	1	1	25	.....	.....	.....	1	.....	.....	.....	27	1	1	.....	.....	.....	.....	.....	1	28
Lawton & Cox.	Clearfield...	1	1	15	.....	.....	.....	2	.....	.....	.....	18	1	1	.....	.....	.....	.....	.....	1	19
Clearfield Lumber Co., Ltd.	Clearfield...	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Alder Run,	Clearfield...	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
W. F. Holt.	Clearfield...	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

E. J. Walker & Co.,	18	19	21	25	29	22	22	24	33	22	18
C. D. Larkin,	17	12	15	16	11	12	13	17	17	8	18
Larkin & Co.,	13	4	8.7	12.5	16.5	23	18.2	19	20	14.7	16.5
Chesterfield Lumber Co., Ltd.,	22.2	17.5	16.5	19.7	18.2	22	17	20.2	21.7	17.5	16.7
W. F. Holt,	13	13	13	13	13	13	13	13	13	13	13
Stratton Bros.,	20	22	18	23	18	29	24	25	24	24	25
Brown & Reeves,	21	25	25	25	25	25	25	24	26	26	25
Mendowbrook Mining Co.,	15	22	15	18	20	12	9	14	26	11	15
Hilling & McLean,	15	11	11	14	16	16	15	20	22	21	23
John Wilton & Son,	23	15	19	19	20	18	17	18	19	15	19
J. M. Robinson,	20	18	20	21	19	18	22	12	22	12	19
Townsend & Milson,	8	6	6	11	15	23	16	21	21	18	21
Reeves Run Coal Co.,	14	8	9	9	14	6	19	11	15	3	9
W. R. Palmer & Co.,	18	9	11	21	11	22	17	12	20	8	19
W. C. Jones & Co.,	25	10									
Stanley Coal Co.,	8	10	11		4	5	12	8	15	10	12
S. V. Davis,									7	16	17
Liberty Coal Co.,	18	8.2	9	8.5							
W. C. Fishburn,	7	6.6	6.2	7.3							
Scott, Hill & Dale,	10.5	4.5	10.5	7.3							
Thomas Exche and Pennsylvania Coal and Coke Co.,											
J. W. Hood,	18	17	15	20	19	6.3	8.3	2	15	10	16
Anda Coal Co.,	18	18	18	22	18	4	11	12.5	16.6	17.6	19.2
Coalville Mining Co.,	22	17	15	11				11.5	12.5	19	11.5
Powerton Coal Mining Co.,	17							17.5	16.5	12.2	23.5
Isaac Rose Sons Co.,	18	18	18	22	19	19	17	15	14	7	18
John Barnes & Sons,	22	22	22	22	18	18	18	18	18	18	18
John Barnes & Sons,	17	17	17	11	15	21	22	22	22	22	22
John Barnes & Sons,	6.6	2.3	4					25	12	7	
John Barnes & Sons,	21	19	21	19	20	21	21	21	21	19	18
John Barnes & Sons,	26	14	17	22	23	14	20	16	8		
Sand, 8476,											

TABLE IV.—List of fatal accidents that occurred in and about the mines of the Eighth Bituminous District for the year ending December 31, 1902.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Feb. 19	William Hill,	American.	Driver,	27	S.	.....	.....	Baltic No. 3,	Clearfield,...	Instantly killed by mine cars.
26	Himes Hallabugh, ..	American.	Miner,	48	M.	1	5	Red Jacket,	Clearfield,...	Fatally injured; body crushed and head squeezed by fall of roof.
Sept. 23	Jesse Chapman,	American.	Boiler tender, ..	23	M.	1	.....	Acme No. 2,	Clearfield,...	Scalded to death by bursting of connection of blow-off pipe.

TABLE V.—List of non-fatal accidents that occurred in and about the mines of the Eighth Bituminous District for the year ending December 31, 1902.

Date to accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan.	Joseph C. Lester, Matthias, Robert Erickson.	Scottish, Pole, Swede.	Miner, Miner, Miner boy.	36 17 11	x x x	Standard No. 4, Forest No. 1, Summersville No. 8.	Chesterfield, Chesterfield, Chesterfield.	Injured by a fall of roof slate. Fracture of leg by a fall of bone coal. Fracture of forearm in three places and back bruised; he fell between a trip of mine cars.
Feb.	John Tampo, Wm. Nicholas, Wm. Curry.	Pole, American, American.	Miner, Pumper, Miner.	24 14 21	x x x	Eureka No. 7, Eureka No. 22, Mt. Vernon No. 7.	Chesterfield, Chesterfield, Chesterfield.	Fracture of arm by a fall of coal. Fracture of arm; caught between mine cars. Slight contusion by a fall of roof slate.
Mar.	Michael Carr, Joseph Larkin, Jr., James Ashman.	Slavonian, Slavonian, English.	Miner, Miner, Miner.	17 19 18	x x x	Deatur No. 3, Biddle No. 2, Standard No. 1.	Chesterfield, Chesterfield, Chesterfield.	Hips injured; coal struck him. Fracture of leg by a fall of coal. Fracture of collar bone by a fall of coal.
May	Albert Brown.	English.	Miner.	26	x	Standard No. 1.	Chesterfield.	Injured severely by the action of powder.
June	August Lohrey, John Hudnovish.	German, Slavonian.	Miner, Miner.	26 35	x x	Standard No. 3, Marristale No. 3.	Chesterfield, Chesterfield.	Head and shoulders slightly bruised by a fall of roof slate.
July	Richard Finkes.	English.	Miner.	65	x	Deatur No. 3.	Chesterfield.	Fracture of thigh by a fall of coal.
Aug.	William Wilson, John Winkler.	American, German.	Miner, Forner.	46 24	x x	Marristale No. 1, Forest No. 1.	Chesterfield, Chesterfield.	Compound fracture of leg by a fall of slate. Compound fracture of hand and fingers by slate.
Sept.	John Chaney, Fred Shuler.	Irish, American.	Ev. car shifter, Ev. car helper.	65 14	x x	Atlantic No. 1, Fiddle No. 1.	Chesterfield, Chesterfield.	Fracture of hip joint by cars. Injured by cars.
Oct.	William H. Jones, P. Hines, Alvin Hines, Alvin Tuckney.	English, English, Hungarian, Hungarian.	Miner, Miner, Miner, Miner.	28 24 24 24	x x x x	Deatur No. 3, Payroll, Red Jacket, Forest No. 1.	Chesterfield, Chesterfield, Chesterfield, Chesterfield.	Injured by fall of slate. Fracture of arm by a fall of slate. Injured by a fall of coal. Injured by a fall of bone coal.
Nov.	James Tuckney, David E. Patrick.	German, Hungarian.	Miner, Mine foreman.	28 34	x x	Forest No. 1, Payroll No. 7.	Chesterfield, Chesterfield.	Injured by a fall of slate. Injured by a fall of slate.
Dec.	Andrew Patton, Thomas Moore, Thomas Alexander, Wm. H. O'Connell.	American, American, American, Slavonian.	Miner, Forner, Miner.	36 36 36	x x x	Payroll No. 7, Payroll No. 3, Payroll No. 3.	Chesterfield, Chesterfield, Chesterfield.	Injured by a fall of coal. Injured by a fall of coal. Injured by a fall of coal.



Ninth Bituminous District.

FAYETTE, ALLEGHENY, SOMERSET AND WESTMORELAND COUNTIES.

Connellsville, Pa., March 24, 1902.

Hon. Jas. W. Latta, Secretary of Internal Affairs, Harrisburg, Pa.

Sir: I have the honor of herewith submitting my annual report as Inspector of Mines of the Ninth Bituminous District for the year ending December 31st, 1902. The quantity of coal mined was 10,159,916 tons, or 1,015,373 tons more than the production in 1901. The quantity of coke product was 2,961,734 tons, or 146,193 tons more than in 1901. This was a very prosperous year for mining. There were thirty-eight fatal accidents, or three less than last year, and seventy-one non-fatal ones, or twenty-nine more than last year. Twenty-four wives were made widows and sixty-four children orphaned by these casualties.

A brief description of the accidents is given, with their causes.

The mines are in fairly good condition, except a few in Somerset county, which were complained of in my last report. A description of all the mines in the district will be found, also the statistical tables in their respective places.

Respectfully submitted,
BERNARD CALLAGHAN,
Inspector.

Summary of Statistics for 1902.

Number of mines in district,	82
Number of mines in operation during 1902,	79
Number of tons of coal produced,	10,159,916
Number of tons shipped to market,	6,176,192
Number of tons sold at mines to local trade,	77,456
Number of tons consumed at mines in generating steam and heat,	209,670
Number of coke ovens in the district,	6,332
Number of coke ovens in operation during 1902,	5,932

Number of tons of coke produced,	2,961,734
Number of tons of coal used in manufacture of coke,....	3,696,604
Number of tons produced by pick mining,	7,171,378
Number of tons produced by compressed air machines,..	336,836
Number of tons produced by electrical machines,	2,651,702
Number of persons employed inside the mines,	9,406
Number of persons employed outside, including coke workers,	3,163
Number of persons employed at manufacture of coke,...	1,759
Number of fatal accidents inside the mines,	37
Number of tons produced for each fatal accident inside, ..	274,592
Number of persons employed per fatal accident inside, ..	254
Number of fatal accidents outside,	1
Number of persons employed per fatal accident outside, ..	3,163
Number of wives made widows by fatal accidents,	24
Number of children orphaned by fatal accidents,	64
Number of non-fatal accidents inside of mines,	71
Number of persons employed per non-fatal accident in- side,	130
Number of non-fatal accidents outside,	2
Number of persons employed per non-fatal accident out- side,	1,573
Number of compressed air locomotives used inside,	4
Number of electric motors used inside,	12
Number of fans used for ventilation,	42
Number of furnaces used for ventilation,	19
Number of gaseous mines in operation during 1902,	14
Number of non-gaseous mines in operation during 1902, ..	68
Number of new mines opened in 1902,	5
Number of old mines abandoned during 1902,	2

A. Production of Coal During the Year 1902.

Names of Companies.	Tons.
H. C. Frick Coke Co.,	1,868,362
W. J. Rainey Coke Co.,	980,548
Pittsburg Coal Co.,	2,423,820
Brown & Cochran,	315,000
J. R. Laughrey & Son,	211,000
Juniata Coke Co.,	200,754
Washington Coal and Coke Co.,	920,473
Cambria Steel Co.,	405,739
James Cochran Sons & Co.,	109,300

Dunbar Furnace Co.,	185,741
Marietta Coal Co.,	15,000
Marietta and Stillwagon Coal Co.,	48,000
Lang Sand and Coal Co.,	20,052
Lake Shore Gas Coal Co.,	140,493
James W. Ellsworth & Co.,	281,353
Blain Coal Co.,	4,800
Glassport Coal Co.,	19,970
Monongahela River Consolidated Coal and Coke Co.,	202,309
Somerset Coal Co.,	935,245
W. K. Niver Coal Co.,	106,964
Rockwood Coal Co.,	6,000
W. A. Merrill & Walker Coal Co.,	29,338
Ursina Coal Co.,	92,957
Fred. Rowie,	17,075
Berlin,	25,859
Merchants Coal Co. Nos. 1 and 2,	146,910
Pen Mar Coal Co.,	15,800
Grace Coal Co.,	39,386
John Meager,	53,800
Continental Coal Co.,	113,709
Fairview Coal Co.,	19,111
Kendall Coal Co.,	4,540
United Coal Co.,	185,357
Southern Coal Co.,	12,100
Viaduct Coal Co.,	3,051
Total,	10,159,916

B. Showing the number of fatal and non-fatal accidents inside and outside the mines; number of tons of coal produced per fatal and non-fatal accident inside the mines; number of persons employed inside and outside; and the number employed inside and outside for every fatal and non-fatal accident for each company during 1902.

Names of Companies.	Number of lives lost inside.	Number of lives lost outside.	Total number of lives lost.	Number severely injured inside.	Number severely injured outside.	Total number severely injured.	Tons of coal produced per each life lost inside.	Tons of coal produced per serious injury inside.	Number employees inside of mines.	Number employees outside of mines.	Total number employed.	Number of employees inside for each life lost.	Number of employees inside for each severe injury.	Number of employees outside for each life lost.	Number of employees outside for each severe injury.
Rockwood Coal Co.,	1		1	1		1	6,000	29,338	15		19		15		4
Maryland & Walker Coal Co.,							29,338	48,967	95		102	95	95		7
Maryland & Walker Coal Co., No. 2,	1		1	1		1	315,000	63,000	189		157		46		6
Brown & Cochran,				3		3		271,000	188		263	188	37		21
J. R. Langhrey & Son,				1		1	200,754	200,754	94		101		101		7
Juniper Coal Co.,				1		1	155,543	155,543	137		230		137		93
Ellettsville & Coke Co.,	8		8	8		8	149,492	35,123	1,325		2,272	165	165		118
Lake Shore Gas Coal Co.,	1		1	4		4	97,117	97,117	115		129	115	28		10
James W. Ellworth & Co.,				3		3	92,870	106,411	36		184	64	64		10
Lurline Furnace Co.,	2		2	2		2	37,117	18,557	128		264	77	77		10
Washington Coal Co.,	13		13	13		13	231,732	16,413	17		2,352	46	46		18
South Mar Coal Co.,	1		1	1		1	132,764	132,764	152		1,349	88	88		11
Central Steel Co.,	1		1	1		1	495,739	292,869	288		349	295	295		13
Maryland River Consolidated Coal and Coke Co.,	1		1	2		2	191,154	191,154	265		692	165	165		37
United Coal Co.,	1	1	2	3		3	187,357	187,357	17		173	156	156		37
W. J. Ratney,	2		2	2		2	226,849	226,849	578		1,285	225	225		192
Southern Coal Co.,	1		1	1		1	12,100	113,769	28		31	14	14		3
Continental Coal Co.,				1		1		929,473	151		168		151		17
Washington Coal and Coke Co.,				1		1		929,473	871		1,293		871		322
Total and averages,	37	1	38	69	2	71	274,592	147,245	9,413	3,163	12,576	254	136	3,163	1,381

Names of Companies.

C. Classification of Fatal Accidents for the Year 1902.

	Inside of Mines.				Outside of Mines.								Grand total.							
	By Falls of		By Falling into		By blasts, etc.	Shafts.	Slopes.	Manways, breast, etc.	Crushed at batteries.	By mules.	Suffocated by coal, etc.	Miscellaneous causes.		Total inside.	By cars.	By machinery.	By suffocation.	By boiler explosions.	Miscellaneous causes.	Total outside.
Coal.	State.	Roof.	By mine cars.	By explosion of gas.									Smothered by gas.								Powder and dynamite.	Total inside.	Total outside.
January,	1		1																	
February,				1																
March,	1																			
April,																				
May,	1			1																
June,	1																			
July,																				
August,	1		1																	
September,																				
October,	1		1	1																
November,																				
December,	1																			
Totals,	7	10	2	2					1											22

D. Classification of Non-fatal Accidents for the Year 1902.

	Inside of Mines.										Outside of Mines.						Grand total.	
	By Falls of			By Falling into				By blasts, etc.	Powder and dynamite.	Smothered by gas.	By explosion of gas.	By mine cars.	By explosion of gas.	By suffocation.	By boiler explosions.	Miscellaneous causes.		Total outside.
	Coal.	Shaft.	Roof.	Shafts.	Slopes.	Manways, breasts, etc.	Crushed at batteries.												By mules.	Suffocated by coal, etc.	Miscellaneous causes.	Total inside.
January,	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10
February,	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
March,	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
April,	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
May,
June,
July,
August,
September,
October,
November,
December,
Totals,	3	30	12	2	.....	.....	.....	.....	1	.....	.....	81	.....	.....	.....	1	3	71

G. Nationality of Employees Killed or Fatally Injured Inside and Outside the Mines During 1902.

	Americans.	Welsh.	Germans.	Poles.	Hungarians.	Italians.	Slavs.	Austrians.	Russians.	Swedes.	Totals.
January, .....	.....	1	.....	.....	.....	.....	.....	.....	.....	1	12
February, .....	.....	.....	1	1	.....	.....	1	.....	.....	.....	3
March,	4	.....	.....	.....	.....	.....	4	.....	.....	.....	8
April, .....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1
May, .....	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	7
June,	1	.....	.....	1	1	1	1	.....	.....	.....	5
July, .....	.....	.....	1	.....	.....	.....	.....	1	.....	.....	2
August, .....	.....	.....	.....	1	.....	.....	.....	1	.....	.....	1
September, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
October, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
November, .....	.....	.....	.....	.....	.....	.....	2	.....	1	.....	3
December,	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Totals,	8	1	12	2	2	2	11	2	1	1	38

H. Nationality of Employees Severely Injured Inside and Outside the Mines During 1902.

	Americans.	English.	Irish.	Germans.	Poles.	Hungarians.	Italians.	Slavs.	Austrians.	Russians.	Totals.
January,	6	.....	1	1	.....	.....	.....	1	1	.....	10
February, .....	.....	.....	.....	1	.....	.....	1	1	.....	.....	3
March, .....	.....	.....	.....	.....	1	.....	.....	1	.....	.....	3
April,	1	2	.....	.....	.....	.....	.....	1	.....	.....	4
May,	5	.....	1	.....	.....	.....	1	2	.....	.....	12
June, .....	.....	1	1	.....	.....	.....	1	1	.....	.....	4
July, .....	.....	.....	.....	.....	.....	2	.....	1	.....	.....	3
August, .....	.....	1	.....	.....	.....	.....	.....	1	.....	.....	2
September, .....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1
October, .....	.....	.....	.....	.....	.....	1	.....	2	.....	1	4
November,	1	.....	.....	.....	.....	.....	1	1	.....	.....	3
December, .....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1
Totals,	31	4	4	4	6	3	4	12	2	3	71

I. Giving names of operators and mines, kind of openings, type and size of fans; size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each employee per minute in Ninth Bituminous district for the year 1902.

Name of Operator and Mines.	Kind of opening.	Uses or non-uses.	Method of ventilation.	Plumber and width of fan in feet.	Water gauge developed—in inches.	Name of fan.	Power used.	Area of furnace openings in square feet.	Number of air splits of air currents.	Number of cubic feet of air per minute entering the mine at inlet.	Total quantity of air per minute circulating in all the splits in cubic feet.	Number of cubic feet per minute passing out at outlet.	Number of persons employed inside.	Average number of cubic feet per minute provided for each person.
S. Somerset Coal Co.														
Pine Hill No. 1.	Drift.	Non-gas.	Fan.	12 x 6	1½	Brazil.	Steam.	.....	.....	25,200	18,000	23,360	149	128
Pine Hill No. 2.	Drift.	Non-gas.	Natural.	.....	.....	.....	.....	.....	.....	21,000	15,000	31,000	19	105
Allegheny.	Slope.	Non-gas.	Fan.	12 x 6	1	Brazil.	Steam.	.....	.....	21,000	12,000	32,000	19	200
Eastport.	Drift.	Non-gas.	Fan.	12 x 6	1	Brazil.	Steam.	.....	.....	21,000	12,000	32,000	19	200
Casselman.	Slope.	Non-gas.	Fan.	12 x 6	1	Brazil.	Steam.	.....	.....	21,000	12,000	32,000	19	200
Summit.	Drift.	Non-gas.	Furnace.	.....	.....	.....	.....	.....	.....	21,000	12,000	32,000	19	200
Thompson.	Drift.	Non-gas.	Fan.	12 x 6	.....	Brazil.	Steam.	.....	.....	21,000	12,000	32,000	19	200
Elk Lick.	Drift.	Non-gas.	Fan.	12 x 6	.....	Brazil.	Steam.	.....	.....	21,000	12,000	32,000	19	200
Elk Lick No. 1.	Drift.	Non-gas.	Fan.	12 x 6	.....	Brazil.	Steam.	.....	.....	21,000	12,000	32,000	19	200
Elk Lick No. 2.	Drift.	Non-gas.	Fan.	12 x 6	.....	Brazil.	Steam.	.....	.....	21,000	12,000	32,000	19	200
Winfield.	Drift.	Non-gas.	Natural.	.....	.....	.....	.....	.....	.....	21,000	12,000	32,000	19	200
Chapman.	Drift.	Non-gas.	Fan.	8 x 4	.....	Brazil.	Steam.	.....	.....	21,000	12,000	32,000	19	200
Chapman No. 1.	Drift.	Non-gas.	Fan.	8 x 4	.....	Brazil.	Steam.	.....	.....	21,000	12,000	32,000	19	200
Chapman No. 2.	Drift.	Non-gas.	Fan.	8 x 4	.....	Brazil.	Steam.	.....	.....	21,000	12,000	32,000	19	200
Tub Mill Run.	Drift.	Non-gas.	Natural.	.....	.....	.....	Electricity.	.....	.....	21,000	12,000	32,000	19	200
Penn Mar Coal Co.														
Penn Mar No. 1.	Drift.	Non-gas.	Fan.	8 x 4	.....	Brazil.	Steam.	.....	.....	21,000	12,000	32,000	19	200
Penn Mar No. 2.	Drift.	Non-gas.	Fan.	8 x 4	.....	Brazil.	Steam.	.....	.....	21,000	12,000	32,000	19	200
Penn Mar No. 3.	Drift.	Non-gas.	Fan.	8 x 4	.....	Brazil.	Steam.	.....	.....	21,000	12,000	32,000	19	200
Standard No. 1.	Drift.	Non-gas.	Furnace.	.....	.....	.....	.....	.....	.....	21,000	12,000	32,000	19	200
Standard No. 2.	Drift.	Non-gas.	Natural.	.....	.....	.....	.....	.....	.....	21,000	12,000	32,000	19	200
Standard No. 3.	Drift.	Non-gas.	Natural.	.....	.....	.....	.....	.....	.....	21,000	12,000	32,000	19	200
Washington Run Coal and Coke Co.														
Washington No. 1.	Drift.	Gaseous.	Fan.	25 x 8	2½	Guibal.	Steam.	.....	.....	198,000	150,000	199,000	370	570
Washington No. 2.	Drift.	Gaseous.	Fan.	25 x 8	2½	Guibal.	Steam.	.....	.....	198,000	150,000	199,000	370	570
Perry.	Slope.	Gaseous.	Fan.	20 x 8	.....	Guibal.	Steam.	.....	.....	198,000	150,000	199,000	370	570

*None. Preparing one.

[illegible]

TABLE I—Continued.

Names of Operators and Mines.	Kind of opening.	(Gaseous or non-gaseous.	Method of ventilation.	Diameter and width of fan in feet.	Water gauge developed—in inches.	Name of fan.	Power used.	Area of furnace bars in square feet.	Number of air splits of air currents.	Number of cubic feet of air per minute entering the mine at inlet.	Total quantity of air per minute circulating in all the splits in cubic feet.	Number of cubic feet per minute passing out at outlet.	Number of persons employed inside.	Average number of cubic feet per minute provided for each person.
Jas. Cochran Sons & Co., Clarissa.	Drift.	Non-gas.	Furnace.	10 x 5	.....	Brazil.	Steam.	8 x 6	2	14,000	12,000	14,000	50	240
Maripeta & Stillwagon, B. & O.	Slope.	Non-gas.	Fan.	.....	.....	.....	.....	.....	1	2,000	1,800	2,000	16	112
Pittsburg Coal Co., Palmer and Cornish, Ocean Nos. 2 and 1.	Drift.	Non-gas.	Furnace.	12 x 8	2½	Capell.	Electricity.	6 x 5	2	25,000	18,000	25,500	140	128
Ocean No. 2.	Drift.	Gasous.	Fan.	12 x 8	2½	Capell.	Electricity.	.....	4	26,200	19,200	26,500	140	137
Sarah.	Drift.	Non-gas.	Fan.	10 x 3	.....	Clarke.	Electricity.	.....	4	6,120	33,280	63,240	250	145
Ocean No. 1.	Drift.	Non-gas.	Furnace.	.....	.....	.....	.....	8 x 8	2	21,300	13,000	22,000	105	123
West Newton shaft.	Shaft.	Gasous.	Fan.	11 x 6	1½	Brazil.	Steam.	.....	2	12,200	20,000	53,140	220	121
Wick Haven.	Drift.	Gasous.	Fan.	11 x 6	1½	.....	.....	.....	4	41,000	30,000	42,000	260	150
.....	Drift.	Gasous.	Fan.	11 x 6	1½	.....	.....	.....	4	17,150	38,800	77,000	270	177
.....	Drift.	Gasous.	Fan.	12 x 8	1½	Robinson.	Steam.	.....	4	10,120	21,000	31,000	245	212
.....	Drift.	Gasous.	Fan.	12 x 8	1½	Capell.	Electricity.	.....	4	35,050	21,000	35,000	245	1,000
.....	Slope & shaft.	Gasous.	Fan.	8 x 6	2	Brazil.	Steam.	.....	4	72,500	41,000	73,980	205	200
Whittset.	Drift.	Gasous.	2 fans.	8 x 3	.....	Clark.	.....	.....	3	36,500	26,200	37,240	140	187
Monongahela River Con. Coal & Coke Co., Browns' No. 2.	Drift.	Gasous.	Fur. & fan	12 x 6	.....	Robinson.	Steam.	8 x 8	3	38,000	28,154	39,290	180	150
.....	Drift.	Gasous.	Fan.	12 x 6	.....	Robinson.	Steam.	.....	1	9,600	9,600	9,600	70	137
.....	Drift.	Non-gas.	Furnace.	.....	.....	.....	.....	4 x 6	1	13,000	12,000	15,250	140	86
.....	Drift.	Gasous.	Furnace.	.....	.....	.....	.....	8 x 8	1	30,000	22,400	30,000	80	280
Lake Shore Gas Coal Co., Troy.	Drift.	Non-gas.	Furnace.	.....	.....	.....	.....	6 x 6	3	21,840	16,000	22,120	135	118
Jas. W. Ellsworth & Co., Earst Hill.	Drift.	Gasous.	Fan.	8 x 6	2	Capell.	Steam.	.....	4	71,000	36,000	72,000	225	160

J. Names of mines using coal cutting machines, names of machines, power used, geological and local names of seams, thickest and thinnest seams where machines are used, and the approximate number of tons produced by machines during 1902.

	Kind of opening.	Gaseous or non-gaseous.	Name and number of machines in use.			Total machines used.	Power used by machines.	Geological and local name of seam.	Average thickness in inches.			Approximate number of tons produced by machines.
			Sullivan.	Jeffrey.	Brown.				Thickest.	Thinnest.	Height of seam in inches.	
Painter & Cornell.	Drift.	Non-gas.		3		3	Electricity.	Pittsburg.	65			126,593
Ocean No. 3 and 4.	Drift.	Gaseous.		3		3	Electricity.	Pittsburg.	65			126,175
Seam No. 2.	Drift.	Gaseous.		3		3	Electricity.	Pittsburg.	65			321,259
Seam No. 3.	Drift.	Non-gas.		4		4	Electricity.	Pittsburg.	65			477,063
West Newton shaft.	Drift.	Non-gas.		4		4	Electricity.	Pittsburg.	65			477,063
Darr.	Drift.	Gaseous.		8		8	Electricity.	Pittsburg.	65			379,013
Banning No. 1.	Drift.	Gaseous.		8		8	Electricity.	Pittsburg.	84	96	80	379,095
Wick Haven.	Drift.	Gaseous.		2		2	Electricity.	Pittsburg.	84	96	80	304,061
Banning No. 2.	Drift.	Gaseous.		2		2	Electricity.	Pittsburg.	84	96	80	215,976
Victoria.	Drift.	Gaseous.		6		6	Compressed air.	Pittsburg.	86	96	86	92,156
Washington Run Coal and Coke No. 1.	Drift.	Gaseous.		6		6	Compressed air.	Pittsburg.	86	96	82	39,000
Washington Run Coal and Coke No. 2.	Drift.	Gaseous.		6		6	Compressed air.	Pittsburg.	86	96	82	28,000
Washington Run Coal, Perry.	Slope.	Gaseous.		6		6	Electricity.	Pittsburg.	86	96	80	121,092
Pen Mar Nos. 1 and 3.	Slope.	Non-gas.		4		4	Electricity.	Pittsburg.	65	65	65	69,692
Dravo.	Drift.	Non-gas.		4		4	Electricity.	Pittsburg.	65	65	65	100,662
Union.	Drift.	Non-gas.		4		4	Electricity.	Pittsburg.	65	65	65	179,834
Brown's No. 2.	Drift.	Non-gas.		4	2	6	Electricity.	Pittsburg.	65	65	65	56,885
Leopold.	Drift.	Non-gas.		4		4	Electricity.	Pittsburg.	65	65	65	14,000
Respect Hill.	Drift.	Gaseous.		4		4	Electricity.	Pittsburg.	65	65	65	100,360
Allegany.	Drift.	Non-gas.		4		4	Compressed air.	Pittsburg.	48		60	195,000
Furnace mine.	Drift.	Non-gas.		2		2	Compressed air.	Upper Freeport.	50	62	48	12,000
Totals.			20	80	2	111						2,988,338

Description of Fatal Accidents.

January 8th, John E. Carlson was instantly killed in his room at Whittset mine, by a fall of slate; he neglected to post it although he knew it was dangerous.

January 15th, W. H. Parker was fatally injured in his room in Ponfeigh mine by a fall of roof and died two days after the accident. This was an unavoidable accident as the roof did not show any sign of being dangerous.

February 7th, Mike Pete was instantly killed by a fall of roof while working on stumps; the roof fell rather suddenly, being in a narrow space.

February 22d, John Swickey was instantly killed by being run over by his loaded trip; in this case it seemed that he was walking along the side of his trip stirring up his team, and then tried to jump on front of trip, but missed his foot and fell with above result.

February 26th, Antonie Lemel was burned to death in Pen Mar mine. While looking down an air shaft while the mine was on fire, being close to the side of shaft, the ground slipped and threw him in.

March 3d, John Stemburg, was instantly killed by slipping off the front of his trip and being caught under it.

March 4th, James Marks was killed by a fall of roof coal. He commenced to knock out posts for a fall, and the first one he knocked out, a piece of roof coal fell on him.

March 4th, George Hibeck was instantly killed by a fall of roof that did not show any sign of danger. He was working a short distance from the entry and without any warning it fell on him.

March 14th, John Gidosh was killed by a fall of roof coal and slate. His work did not show any sign of carelessness.

March 17th, Steve Pohole, Elm Grove, was killed by a fall of coal.

March 17th, Martin Greglok, Trotter, was killed by a fall of roof. Everything in this case showed carelessness.

March 18th, Peter Cook, Elm Grove, was killed by a fall of coal and slate. He was in the act of taking back stumps. He was considered a very practical miner, but, in this case, it seemed that he risked too much.

March 27th, Robert Ezzet, Elm Grove No. 2, was fatally injured by his loaded trip, on account of him stepping off on wrong side; carelessness on his part.

March 14th, Guiseppa Menicardi, Ocean No. 2, was almost instantly killed by a fall of slate. This was a case of extreme carelessness.

May 1st, Mike Busenack was instantly killed by a fall of slate and coal. Bad judgment was the cause of this accident.

May 5th, Steve Cholekosky, Leisenring No. 3, was instantly killed by going under the cage instead of going around the manway.

May 16th, Mike Diens, Banning No. 1, was almost instantly killed by a fall of coal. He had fired a shot and went to see the outcome of it, and in going too close to the face, a piece fell on him with the above result. Died four hours after.

May 17th, Thomas H. McGown, was instantly killed by a fall of slate that did not seem very large while up, but when it fell it weighed 125 lbs.

May 24th, Charles Bondos, was instantly killed in Leisenring No. 1, with the motor. This person instead of walking out the manway, walked out on the empty car track, and meeting the motor had not enough of room to keep clear of it.

May 31st, Mike Styman was instantly killed by a fall of slate. The place seemed safe, but fell suddenly.

May 31st, Sandy Miller, Summit, was fatally injured by falling down a shaft from one seam to the other, a distance of 40 feet. A loaded trip came in, and thinking it was coming too near the shaft he stepped too far and fell down. He died August 23d.

June 7th, George Santmyer, Superintendent Washington mine No. 1, was instantly killed by the cage at the bottom of the shaft. This happened rather strangely. He was in the mine with two mine foremen, and coming out he went to the shaft instead of going out the manway along with the mine formen and assistant. The hoisting of coal was over and everything still. The engineer was oiling the slides, and being through before Santmyer was across, he ran the cage up and down to spread the oil, and in doing so landed the cage on him.

June 10th, Tim Moloney was killed by a fall of slate while taking a pillar back. This was another case of carelessness.

June 10th, John Oswakas was instantly killed by a post being knocked out against him, while he was knocking out posts under slate.

June 19th, Daniel Poser was killed by a fall of slate in his room. Carelessness on his part.

June 26th, John Bososkie, was killed by a fall of coal and slate. He was just starting a room on the heading and did not see the danger, but it could have been seen by a practical miner. He had not been working long in the mine.

June 27th, John Lavalance was killed by electric shock. He was engaged to help the electrician to put up wires for machines, and while working alongside of main wire, 500 volts tore it down on top of him.

July 8th, Joseph Wagner was instantly killed by a fall of coal. He depended on the coal staying up and lost his life.

July 25th, Andy Liptoch was instantly killed by a fall of coal. He had an empty wagon in his room and had plenty of loose coal to load

it, but commenced to undermine a corner without spragging it, when it fell on him.

August 18th, Frank Lesar was fatally injured by a fall of slate. He died two weeks after the accident. Carelessness on his part.

August 28th, Joseph Shultz was instantly killed at Davidson shaft by a fall of roof. This place seemed to be well enough posted, but a large quantity fell over them while he was loading his wagon.

September 22d, Passlo Sena was instantly killed outside by the haulage rope slipping off the sheave; he had no business there.

October 15th, Charles Trumpoe, was instantly killed by a fall of coal. He lost his life through carelessness.

October 20th, John Noke, was instantly killed by the cage. He and another man came to the bottom of the shaft when the cage had left, the day's work being over, and after they signalled to hoist, Noke was too long getting on the cage and was caught between the cage and shaft.

November 5th, Michael Smith was instantly killed by a fall of coal. This man knew that he was risking his life because he was told by his partner and the tracklayer, but he did not heed them. The tracklayer went out to tell the mine foreman, and met him coming in, not over 500 feet from the place, but before he reached it the coal fell and killed him.

November 15th, Mike Makala was instantly killed by being caught between two loaded wagons. In stopping one wagon to go in a room for another, he was coming out in front of it and allowed himself to be caught between the two.

November 28th, Mike Kolnt was instantly killed by a fall of roof in his room.

December 11th, Enoch Johnston was killed by a fall of roof. He was changing his road and had some posts to change also, and while knocking out the first post the roof fell on him. This was a dangerous roof, and he was a very practical miner, but made a mistake on this occasion.

Mine Foreman, First Grade.

The following candidates passed the examination held for mine foreman and fire bosses, January 21, 22, 23, 1902.

Peter Lacy, Mt. Braddock; Samuel Cummings, Vanderbilt; John C. Carroll, Roscoe; Roger Rigby, Elizabeth; John Hobin, Oliver; John J. Hoover, Leisenring; Daniel Darby, Star Junction; David Muir, Mustard; Constantine McGregor, Bridgeville; John King, Ellsworth; Lewis Fuehrer, Leisenring No. 2; Joseph Hall, Star Junction; John Whitney, Elm Grove; William Herron, Hermanie; P. J. Callaghan, Mt. Pleasant; Daniel McCullough, Van Meter; George Nersh, Alver-

ton; John McClain, Whitney; Michael Callaghan, Opekiska; William Pegg, Wattersburg.

Second Grade.

Theodore Cramer, Connellsville; Charles F. Cochran, Elk Lick.

Fire Bosses.

William C. Keck, Bradford; James M. Callaghan, Pricedale; Robert Whitlaw, Banning; James Sweeny, Footdale; Nels G. Balling, Greensburg; Owan Murphy, Dunbar; Daniel Dougherty, Connellsville; Martin Boyle, Everson; Samuel R. Means, Vanderbilt; James Whalen, Lambert; Edward Bailey, Connellsville; Hugh Friel, Wick Haven; Patrick Cullen, Vanderbilt; John Keck, Broadford; Walter Snyder, Vanderbilt; Anthony Haley, Broadford; James Durkin, Latrobe; Luke Walheim, Blairsville; Joseph Malin, Leisenring; James Dunn, Wick Haven; Thomas T. Glenn, Edenborn; William Muir, Mustard; David E. Pritchard, Sutersville; George Lindsay, Mt. Pleasant; Jolins Schopsky, United; Thomas Wilkinson, Pleasant Unity; Thomas London, Connellsville; Thomas Hart, Trotter; Joseph Flanagan, Trotter; Peter McNulty, Trotter; John Maley, Leisenring; John McKenna, Lecrone; John Curry, Oliver.

Mines on the P. & L. E. R. R.

Adelaide has the same record as last year. Ventilation, drainage and other conditions are good.

Fort Hill.—This mine is opened under a large hill, and the front of it has been showing signs of a squeeze inside the opening for some time, and every cut-through was well cribbed with railroad ties. It seemed to have a good effect until one month ago, when the whole front slipped and knocked away the coal bins and closed the opening. This was caused by the hill slipping under the coal and limestone, but a new opening was made and they got to work again in a very short time without much cost, for a place of this kind. The ventilation and drainage are fairly good.

Paul is a large mine and controls a large output. The drainage and ventilation are good.

Nellie.—This mine is practically a new opening. The coal they used to hoist up the shaft is nearly all worked out, and they are working on the raise side of the coal measures, which gives them good drainage, good haulage and good ventilation, with a good new fan.

Clarissa is a mine with good natural conditions which makes easy work to keep in good order.

Kendall is a new opening made to an old one that was used for custom sale. They are now shipping coal with good results inside and outside.

Washington No. 1 would be hard to beat as to ventilation and a large coal production, which the accompanying tables will show.

Washington No. 2.—The same as No. 1.

Victory.—Although not as large an operation as Washington mines, can be credited with the same conditions.

Perry is in good condition in every respect.

Whittset is in good condition. The fans that were in each opening were too small for ventilation but they now have good supply from Banning No. 2.

Banning No. 2 will shortly be one of the model mines. The outside head frames show the amount of coal they intend to handle, and the inside will do the same. They have plenty of good ventilation, also quite a quantity of explosive gas.

Wick Haven is in fairly good condition in all respects. It is an extensive mine and well looked after.

Banning No. 1 is an extensive mine and can put out more coal than can be taken care of at the tipples. Ventilation and drainage are good.

Darr can now be considered in first class condition. No. 15 is through to daylight, which gives it another opening for ventilation. It is a very large mine and needed this advantage.

West Newton Shaft.—This would be a good mine if it had a larger hoisting shaft or slope and larger pit wagons and better air courses, with better overcasts. There is not much complaint of the quantity of ventilation in the headings, but there are too many persons in one continuous air current. Drainage and hauling roads are in good order.

Ocean No. 5.—Cost has not been spared in improving it for a large output. There is a large territory and some very unpleasant local swamps to overcome, and when they put in a good fan they will be in good condition. Furnace ventilation they have at present, which is fairly good.

Forrest Hill is in good condition as to ventilation, but they are having trouble with local swamps. They are showing the best system of mining machine in the district.

Sarah is being put in condition to make it a large mine. Although the ventilation is by fan it will soon have to be replaced by a better one. Ventilation and drainage at present are fairly good.

Ocean No. 2.—This mine was kept in good condition. It will not be in my district after this year, but I hope it will always continue the same.

Ocean No. 3 and 4.—These two mines can be considered only one,

as their coal is all dumped at same tipple and not so very extensive. Ventilation and drainage fairly good.

Painter & Cornell is on the decline unless they get more coal to operate. They have very little solid coal now. Ventilation is by two furnaces, which don't give too much.

Dravo is another mine ventilated by a furnace, and only that they have some openings to daylight and not very much solid coal, they would be very short in ventilation; drainage is not too good.

Browns Nos. 1 and 2.—These mines have been shipping by river. They now have siding of railroad to No. 2 and are going to have steady work. No. 1 has not done any work this year. The ventilation is by furnace and fan, and besides they have one entry through on Lavedale, which is a connection of one river to the other. Conditions all through are fairly good.

Mines on the Belle Vernon, P. & L. E. R. R.

Glassport.—This is a small mine used only for custom coal and doesn't come under the provisions of the mine law. Only in winter are conditions good.

Belle Bridge is in fairly good condition when it is working, but they ship by river, which doesn't give them constant work.

United is another furnace mine, which means that the ventilation is not too good. They have worked some of their headings to daylight, which helps them greatly. Drainage is good.

Lovedale will soon be a large mine. Great improvements are being made outside and inside. They are putting up a large Capell fan and electric dynamo and new tipple, by which coal can be loaded by river or railroad.

Gospel is in good condition, but will not be long so if they depend on a furnace for ventilation in a large territory.

Blaine.—This is entirely a new opening and by the appearance of the outside it will make a good showing for a large output.

Mines near Connellsville.

Henry Clay has a good record for ventilation and drainage.

Davidson Shaft.—This mine gives a large output, and the ventilation is well looked after, but small local swamps give them great trouble in the drainage.

Coal Brook.—The conditions of this mine are good in regard to ventilation. Their water is all pumped at Davidson shaft. Drainage also good.

Grace.—There are no complaints of this mine in regard to ventila

tion, drainage and accidents. While there is a large volume of water to pump, they are always able to overcome it.

Trotter needs no comment this year, other than what was said in last year's report. Conditions all good.

Leisenring No. 1.—A large mine and output, with two air locomotives; it is well up to the requirements of the mining law.

Leisenring No. 3.—Is good in ventilation and drainage, but they seem to have something to learn in the system of mining coal under a very heavy cover.

Juniata is good in ventilation and drainage. Their work at present is nearly all stumps and pillars.

Elm Grove.—By making some changes in the coal properties they are getting in first class condition regarding ventilation and output.

Wheeler and Morrell are both exhausted, and there is no description required.

Atlas and Mahoning.—Both being connected in ventilation and drainage can be described together. Their ventilation and drainage are good, but their volume of water is so great that they are almost overpowered.

Ferguson is fast on the retreat, having no solid coal to work. Ventilation and drainage give them very little trouble.

Furnace.—This mine is doing good from the improvements. The seam is the Freeport E. and is from 4 to $5\frac{1}{2}$ feet in height; the pitch is about 15 per cent. against the lead, which gives them trouble.

Basil.—It is only in winter that this mine comes under the provisions of the mining law, and there is not much coal to mine. Drainage and ventilation are good.

Marietta.—This is an old mine. It was formerly used for domestic purposes, but they now are shipping the coal, and it comes under the provisions of the law.

B. & O.—Conditions all good. Only a small number of persons inside.

Mines in Somerset County, B. & O. R. R.

Ursina, formerly called Rosebud, is still having good thick coal in the barren measures. Conditions good in ventilation and drainage.

Reed.—This mine done very little work during the year. They have put up a new fan and are commencing to work more constantly. The pitch of the coal makes drainage easy.

Williams, now called Southern.—A new fan has been put in and is working in their new opening with excellent results in ventilation and drainage.

Rockwood is in fairly good condition, but will not last long in this way if they don't put up a fan or furnace.

Viaduct is making no attempt to have ventilation and there are few mines working that need it more. They are not yet under the mining law, but so near it, that I always visit them when I am at Rockwood.

Caselman.—Operator is improving the mine inside and outside, and it needs all it can get. The air current at the far end of the entries is so slack and the rooms so steep that there is very little for the diggers, although they have an apology for a fan.

Mines on the Berlin Branch.

Enterprise.—A fan has been installed which is giving fairly good results; drainage is all right.

Ponfeigh is working from a new opening. They have a new fan, which puts their mine in good condition. Drainage is also good.

Allegheny is in very good condition at present, but some improvements must be made so that all of their workmen will not be in one air current.

Standard No. 1.—This mine has been improved in ventilation by increasing the area of furnace outlet.

Standard No. 2 not working.

Standard No. 3.—Is a new operation with two openings of different seams on the barren measures. They are in good condition with natural ventilation.

Pine Hill, formerly called Lottie No. 1, is in fairly good condition as to ventilation and drainage. Their work is extending so fast that they will soon find that the air courses are too small to serve for the ventilation they will require.

Pine Hill No. 2.—This is a new opening. Conditions seem fairly good.

Berlin, formerly called Stoner, has good results from natural ventilation. This is helped greatly by the miners using sunshine instead of impure oil; also by not firing shots until the run is over.

Grace is a small mine and they have not much solid coal to work. They have furnace ventilation in the two openings, but better results are had from daylight openings, than from the furnace ventilation; drainage is only fair.

Pen Mar No. 2 is a new shaft, 372 feet deep. They are not very far extended from the shaft yet. They need plenty of pumps to keep the water out.

Pen Mar No. 3 is in the same territory, but is reached by a slope which has a pitch of 15 per cent. towards the shaft. This is a large coal territory, and a great deal of money has been spent on these operations, and a great deal more is required yet.

Salisbury Branch.

Pen Mar No. 1.—There was a great deal of trouble at the beginning of the year from a mine fire near the front opening which obliged them to go around the hillside for a new opening. They have not much more solid coal to work, and will soon be on the retreating pillars. They removed the fan to the far end part of the workings, which puts them in fairly good condition.

Tub Mill Run is on the retreating system for want of solid coal. The natural conditions give them good results in drainage and ventilation.

Merchants No. 2 is almost finished. No work has been done since October. While they have quite a territory of pillar work to take out, the mining rights on the surface have barred them at present. The same can be said of No. 2.

Merchants No. 3 has had trouble with regard to local swamps and changes in the quality of the coal for a long distance, but they are now getting over the worst of it, and it is in better condition for a large output.

Grassy Run is a mine with good natural conditions. There is a furnace for ventilation, but it is never lit on account of the difference of elevation of inlet and outlet. They are also very fortunate in not having mine accidents. I have only one complaint to make about this mine, that is I have never seen the mine foreman's report book to see what he enters in it. He doesn't seem to understand Article VI, Sections 1, 7, 8, but he soon will.

Chapman Nos. 1 and 2.—No. 1 has all of the solid coal worked and is now fetching back the pillars and stumps, with natural ventilation good from surface falls, and drainage also good. No. 2 is working the 4 feet seam above it, and has now a new fan for ventilation, which puts it in good condition.

Fairview now has a furnace at the far end of the workings, which gives some ventilation which they did not have before; the mine foreman at this mine forgot the mining law until I entered suit against him for violation of Article VI, Sections 1, 7 and 8.

Hamilton is in good condition, with a small amount of solid coal to work; ventilation and drainage are excellent.

Wilmott is a small mine with very little solid coal to work. The difference of elevation at inlet and outlet gives good natural ventilation, also drainage.

Glen Maclaren No. 1 is in the big seam with furnace ventilation which is poor, and the same can be said regarding the drainage. No. 2 is in 4 foot seam with fan ventilation which is well up to the requirements of the mining law.

Elk Lick No. 1, former name Shaws No. 1, is an extensive mine with electric motor for hauling the coal. They have fan ventilation, which

gives a good inlet current of air, but it seems to get tired before it reaches the working places, on account of small air courses and poor stopping. Drainage is favorable.

Elk Lick No. 2 is a new mine with furnace ventilation. Gives a good supply of air at present; drainage is also good.

Thomas is an old mine and has old ventilation, the kind that was in practice before the mining law was adopted; but there will soon have to be some change made. The furnace is built almost in the form of a Davy lamp, hanging up in an outlet called a drain.

Mystic.—This mine is well named, which means something hidden or sacred. In this case it means ventilation. It is well that it wont last long. This is another case of the mine foreman being ignorant of Article VI, Sections 1, 7 and 8. He is the operator also.

Summit, former name Cumberland.—They have built a splendid furnace which gives 61,600 cubic feet per minute and makes a great improvement in the mine; drainage is fairly good.

TABLE I—Showing names of operators, railroads, etc., and location of collieries in the Ninth Bituminous District for the year 1902.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Pittsburg Coal Co.						
Painter Nos. 3 and 4.....	Allegheny.....	Geo. W. Schluederberg.	Pittsburg.	Thomas Whiteman.....	Frank,	P. & L. E. R. R.
Ocean No. 2.....	Allegheny.....	Geo. W. Schluederberg.	Pittsburg.	Thomas Whiteman.....	Frank,	P. & L. E. R. R.
Sarah.....	Allegheny.....	Geo. W. Schluederberg.	Pittsburg.	W. H. Cornell.....	Hy Chedale,	P. & L. E. R. R.
West No. 3.....	Allegheny.....	Geo. W. Schluederberg.	Pittsburg.	F. M. Pritchman.....	West Newton,	P. & L. E. R. R.
Dart.....	Allegheny.....	Geo. W. Schluederberg.	Pittsburg.	Julius Joseph.....	Franking,	P. & L. E. R. R.
Banning No. 1.....	Allegheny.....	Geo. W. Schluederberg.	Pittsburg.	Donald Alsop.....	Banning,	P. & L. E. R. R.
Wick Haven.....	Allegheny.....	Geo. W. Schluederberg.	Pittsburg.	Donald Alsop.....	Franking,	P. & L. E. R. R.
Bainum No. 2.....	Allegheny.....	Geo. W. Schluederberg.	Pittsburg.	Edward Sappitt.....	Whittset,	P. & L. E. R. R.
Whittset.....	Allegheny.....	Geo. W. Schluederberg.	Pittsburg.	Edward Sappitt.....	Whittset,	P. & L. E. R. R.
H. C. Frick Coke Co.						
Adamsburg.....	Fayette.....	O. W. Kennedy.....	Scottsdale.	Jas. A. Childs.....	Adamsburg,	P. & L. E. R. R.
Coal Creek.....	Fayette.....	O. W. Kennedy.....	Scottsdale.	M. W. Hood.....	Moyer,	P. & L. E. R. R.
Davidson shaft.....	Fayette.....	O. W. Kennedy.....	Scottsdale.	W. H. Hugs.....	Cornellsville,	P. & L. E. R. R.
Henry Clay.						
Lanesburg No. 1.....	Fayette.....	O. W. Kennedy.....	Scottsdale.	W. C. Mullin.....	Broad Ford,	P. & L. E. R. R.
Lanesburg No. 2.....	Fayette.....	O. W. Kennedy.....	Scottsdale.	James Collins.....	Lanesburg No. 1,	P. & L. E. R. R.
Trotter.....	Fayette.....	O. W. Kennedy.....	Scottsdale.	J. J. Farney.....	Lanesburg No. 2,	P. & L. E. R. R.
Somersett Coal Co.						
Pine Hill No. 1.....	Somersett.....	J. C. Baylan.....	Somersett.	D. R. Phillips.....	Garnett,	P. & L. E. R. R.
Pine Hill No. 2.....	Somersett.....	J. C. Baylan.....	Somersett.	D. R. Phillips.....	Garnett,	P. & L. E. R. R.
Allegheny.....	Somersett.....	J. C. Baylan.....	Somersett.	D. R. Phillips.....	Garnett,	P. & L. E. R. R.
Somersett.....	Somersett.....	J. C. Baylan.....	Somersett.	D. R. Phillips.....	Garnett,	P. & L. E. R. R.
The Mt. No. 1.....	Somersett.....	J. C. Baylan.....	Somersett.	D. R. Phillips.....	Garnett,	P. & L. E. R. R.
ERK No. 2.....	Somersett.....	J. C. Baylan.....	Somersett.	D. R. Phillips.....	Garnett,	P. & L. E. R. R.
W. C. No. 1.....	Somersett.....	J. C. Baylan.....	Somersett.	D. R. Phillips.....	Garnett,	P. & L. E. R. R.
Hamlet No. 1.....	Somersett.....	J. C. Baylan.....	Somersett.	D. R. Phillips.....	Garnett,	P. & L. E. R. R.
Chapman.....	Somersett.....	J. C. Baylan.....	Somersett.	D. R. Phillips.....	Garnett,	P. & L. E. R. R.
Chapman.....	Somersett.....	J. C. Baylan.....	Somersett.	D. R. Phillips.....	Garnett,	P. & L. E. R. R.
Tub Mt. No. 1.....	Somersett.....	J. C. Baylan.....	Somersett.	D. R. Phillips.....	Garnett,	P. & L. E. R. R.
Washington Coal & Coke Co.						
Washington No. 1.....	Fayette.....	P. Newmeyer.....	Pittsburg.	J. J. Farney.....	Stone,	P. & L. E. R. R.
Washington No. 2.....	Fayette.....	P. Newmeyer.....	Pittsburg.	J. J. Farney.....	Stone,	P. & L. E. R. R.
For 3.....	Fayette.....	P. Newmeyer.....	Pittsburg.	J. J. Farney.....	Stone,	P. & L. E. R. R.

TABLE I—Continued.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Cambria Steel Co.						
Mahoning.....	Fayette.....	John N. Pott.....	Dunbar.....	J. Stoker.....	Dunbar.....	B. & O. & S. W. B. of P. R. R.
Atlas.....	Fayette.....	John N. Pott.....	Dunbar.....	J. Stoker.....	Dunbar.....	B. & O. & S. W. B. of P. R. R.
Wheeler.....	Fayette.....	John N. Pott.....	Dunbar.....	J. Stoker.....	Dunbar.....	B. & O. & S. W. B. of P. R. R.
Morrell.....	Fayette.....	John N. Pott.....	Dunbar.....	J. Stoker.....	Dunbar.....	B. & O. & S. W. B. of P. R. R.
W. J. Rainey.						
Graco.....	Fayette.....	T. J. Mitchel.....	Connellsville.....	Thomas Johns.....	Moyer.....	P. R. R., S. W.
Fort Hill.....	Fayette.....	T. J. Mitchel.....	Connellsville.....	J. B. Henderson.....	Vanderbilt.....	P. & L. E.
Elm Grove.....	Fayette.....	T. J. Mitchel.....	Connellsville.....	J. B. Henderson.....	Vanderbilt.....	B. & O. Short Line.
Monongahela River Can. Coal & Coke Co.						
Brown's No. 1.....	Allegheny.....	O. A. Blackburn.....	Pittsburg.....	G. W. Peterson.....	Bundla.....	P. & L. E. R. R.
Lowdale.....	Allegheny.....	O. A. Blackburn.....	Pittsburg.....	G. W. Peterson.....	Bundla.....	River.
Boyle Bridge.....	Allegheny.....	O. A. Blackburn.....	Pittsburg.....	Thomas Jones.....	Elizabeth.....	River.
Gospel.....	Allegheny.....	O. A. Blackburn.....	Pittsburg.....	Esra Conway.....	Elizabeth.....	River.
W. K. Niver Coal Co.						
Pen Mar No. 1.....	Somerset.....	John Lochrie.....	Windber.....	A. E. Davis.....	Elk Lick.....	Meyersdale Br. B. & O.
Pen Mar No. 2.....	Somerset.....	John Lochrie.....	Windber.....	T. D. Forsythe.....	Berlin.....	Berlin Br. B. & O.
Pen Mar No. 3.....	Somerset.....	John Lochrie.....	Windber.....	T. D. Forsythe.....	Berlin.....	Berlin Br. B. & O.
Dunbar Furnace Co.						
Ferguson.....	Fayette.....	S. G. Valentine.....	Dunbar.....	John W. Greaves.....	Dunbar.....	P. R. R., S. W. Branch, and B. & O.
Furnace mfrs.....	Fayette.....	S. G. Valentine.....	Dunbar.....	John W. Greaves.....	Dunbar.....	P. R. R., S. W. Branch, and B. & O.
Forrest Hill.....	Allegheny.....	A. A. Augustus.....	Cleveland, Ohio.....	James Henderson.....	Suterville.....	P. & L. E. R. R.
Just W. Ellsworth Coal Co.						
Merchants' Coal Co.	Somerset.....	R. S. Garrett.....	Elk Lick.....			Meyersdale Br. B. & O.
Merchants' No. 2.....	Somerset.....	R. S. Garrett.....	Elk Lick.....			Meyersdale Br. B. & O.
Merchants' No. 3.....	Somerset.....	R. S. Garrett.....	Elk Lick.....			Meyersdale Br. B. & O.
United Coal Co.	Allegheny.....	H. D. O'Neill.....	McKeesport.....	James D. O'Neill.....	Elizabeth.....	P. & L. E. R. R.

Lake Shore Gas Coal Co. Dravo,	Allegheny,	C. H. Weiser,	Robbins Station,	A. J. Weiser,	Robbins Station,	P. & L. E. R. R.
Brown & Cochran, Nelle,	Fayette,	J. R. Laughrey,	Dawson,	I. W. Knight,	Vanderbilt,	P. & L. E. R. R.
J. R. Laughrey & Son, Victoria,	Fayette,	J. R. Laughrey,	Dawson,	J. S. Laughrey,	Washington Run,	P. & L. E. R. R.
Juniata Coke Co., Juniata,	Fayette,	Adam Nicholson,	Juniata,			B. & O. Short Line.
Jas. Cochran Sons & Co., Clarissa,	Fayette,	N. A. Rist,	Dawson,			P. & L. E. R. R.
The Continental Coal Co., Glen Michigan,	Somerset,	John Maurice,	Meyersdale,	Daniel T. McLaren,	Meyersdale,	Salsburg Br., B. & O.
Ursina Coal Mining Co., Ursina Nos. 1 and 2,	Somerset,	L. T. Huff,	Humber,			Ursina Branch, B. & O.
Marietta & Stillwagon, B. & O.,	Fayette,	Clair Stillwagon,	Connellsville,			B. & O. R. R.
John Meager, Grassy Run,	Somerset,	John Meager,	Elk Lick,			Salsburg Br., B. & O.
Grace Coal Co., Grace,	Somerset,	E. F. Fisher,	Pittsburg,	T. J. Colburn,	Berlin,	Berlin Branch, B. & O.
Merrill & Walker, Ponfouch,	Somerset,	W. A. Merrill,	Garrett,			Berlin Branch, B. & O.
Stoner Coal Co., Berlin,	Somerset,	John O. Stoner,	Berlin,			Berlin Branch, B. & O.
Galloway & Claxton, Fairview,	Somerset,	Thomas Ross,	Meyersdale,			Salsburg Br., B. & O.
Pon Mar Coal Co., Standard Nos. 1 and 2,	Fayette,	W. A. Merrill,	Garrett,			Berlin Branch, B. & O.
Lang Coal & Sand Co., Basel,	Fayette,	Robert Lang,	New Haven,			P. R. R., S. W. R.
Frost Rowle, Mystic,	Somerset,	Frost Rowle,	Meyersdale,			Meyersdale Br., B. & O.
Marietta Coal Co., Marietta,	Fayette,	Wade Marietta,	Connellsville,			Custom coal
Glassport Coal Co., Glassport,	Allegheny,	W. A. Wilson,	Glassport,			Custom coal.

TABLE I—Continued.

Names of Operators and Col- lieries.	County.	Name of General Su- perintendent.	P. O. Address.	Name of Superin- tendent.	P. O. Address.	Railroad to Mine.
Southern Coal Co. Southern No. 1.	Somerset.	F. H. Darby.	Rockwood, ....	.....	.....	B. & O. R. R. B. & O. R. R.
Southern No. 2.	Somerset.	F. H. Darby.	Rockwood, ....	.....	.....	B. & O. R. R.
Rockwood Coal Co. Rockwood.	Somerset.	J. M. Wolfenberger. ...	Rockwood, ....	.....	.....	B. & O. R. R.
Kendall Coal Co. Kendall.	Fayette.	R. O. Thomas.	Connellsville, ....	.....	.....	P. & L. E. R. R.
Blaine Coal Co. Blaine.	Allegheny.	William Seddon.	Lock No. 3, ....	.....	.....	P. & L. E. R. R.
Viaduct Mining Co. Darlington.	Somerset.	E. H. Werner.	Rockwood, ....	.....	.....	B. & O. R. R.

TABLE II—Gives the total number of tons of coal mined and tons of coke produced in each colliery, number of days worked, number of employees, number of employees killed and injured, number of kegs of powder, etc., used in the Ninth Bituminous District for the year ending December 31, 1902.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Total production of coke in tons.	Number of coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Pittsburg Coal Co.														
Painter.	Allegheny.	141,979	1,660	56	142,729			255	152			1,290		7
Ocean No. 3 and 4.	Allegheny.	105,317	4	618	105,929			220	181	1		1,000		9
Scrubb.	Allegheny.	224,922	31	187	225,139			256	216	1		2,000		29
West No. 3.	Allegheny.	178,662	2	124	178,888			248	135			270		8
West Newton shaft.	Allegheny.	257,824	6	539	258,369			233	234			1,000	250	15
Westmoreland.	Westmoreland.	11,171	4,357	50	15,578			261	271	1	6	1,500	500	23
Bearington No. 1.	Westmoreland.	26,172	8,635	27	34,834			271	279	1	1	1,300	600	23
Wick Haven.	Westmoreland.	225,135	12,244	901	238,280			276	265	1	1	1,300	300	29
Bearington No. 2.	Fayette.	36,008	3,876	81	40,965			283	194	1		1,100	8,000	3
Wharton.	Fayette.	158,265	1,957	428	160,650			285	194	1		1,100	300	9
Totals.		2,389,882	29,557	3,404	2,413,839			3,954	3,295	16	13	11,376	11,000	102
H. C. Frock Coke Co.														
Addicks.	Fayette.	18	4 1/8	3,112	3,134 1/8	137,600	37	307	246			829		41
Coal Brook.	Fayette.	5,200	1,880	1,408	102,488	69,100	129	285	167	1				14
Davidson shaft.	Fayette.	88,298	8,057	2,292	298,472	125,600	222	300	224	1			225	29
Henry Clay.	Fayette.	8,532	3,714	2,792	149,300	6,400	129	885	119			782		16
Leicester No. 1.	Fayette.	19,932	7,708	3,228	296,364	220,000	500	279	440	1	1		2,575	62
Leicester No. 2.	Fayette.	19,294	1,392	1,392	215,300	215,300	364	288	48				3,895	62
Trotter.	Fayette.	5,100	9,400	1,846	345,110	79,000	464	256	11	1	1		200	55
Totals.		137,772	47,621	17,790	1,808,392	1,490,000	2,410	269	3,272	8	7	1,492	7,065	279

*Totals in this column are averages.

TABLE II—Continued.

County.														
Names of Operators and Collieries.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Total production of coke in tons.	Number of coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.	
Somerset Coal Co.														
Pine Hill No. 1.	78,469	757	57	79,283	.....	.....	197	111	.....	.....	658	.....	16	
Pine Hill No. 2.	2,240	13	12	2,315	.....	.....	103	6	.....	.....	.....	.....	.....
Allochey.	57,948	1,841	236	60,025	.....	.....	204	103	1	4	1,256	150	13	
Enterprise.	31,800	43	31	31,874	.....	.....	196	59	.....	.....	.....	.....	.....
Casselman.	83,427	2,325	500	86,252	.....	.....	333	123	.....	.....	1,035	.....	15	
Summit.	164,290	1,576	652	166,518	1,167	20	215	214	1	2	3,740	.....	24	
Thomas.	21,650	.....	50	21,700	.....	.....	225	32	.....	.....	418	.....	3	
Elk Lick No. 1.	213,183	36,680	1,504	211,377	26,649	75	207	343	.....	.....	4,620	.....	22	
Elk Lick No. 2.	16,177	70	56	16,303	.....	.....	167	93	1	3	1,320	.....	5	
Willmoth.	36,088	30	46	36,165	.....	.....	186	54	.....	.....	484	200	3	
Hamilton.	65,412	146	101	65,749	.....	.....	100	54	.....	.....	792	.....	3	
Chapman No. 1.	55,607	5	66	53,678	.....	.....	189	68	1	1	814	.....	7	
Chapman No. 2.	17,965	.....	23	17,988	.....	.....	200	27	.....	.....	175	.....	3	
Tub Mill Run.	48,826	.....	192	46,018	.....	.....	100	35	.....	.....	594	.....	6	
Totals.	888,143	43,486	3,616	935,245	27,816	95	196	1,392	3	13	16,922	350	127	
Washington Coal and Coke Co.														
Washington No. 1.	374,564	7,966	600	383,130	227,540	325	308	633	1	.....	2,708	12,213	57	
Washington No. 2.	356,727	8,459	5,480	370,705	96,120	170	308	435	.....	1	2,700	12,100	43	
Perry.	194,528	2,466	3,614	166,638	.....	.....	285	124	.....	1	1,016	3,125	11	
Totals.	891,819	18,921	9,733	920,473	323,660	495	300½	1,292	1	2	6,424	27,438	111	
Cambria Steel Co.														
Mahoning.	8,092	11,804	1,422	130,605	83,566	169	311	159	.....	1	8	367	34	
Atlas.	8,841	2,795	769	256,787	181,767	392	311	364	.....	1	17	733	50	

*Totals in this column are averages.

Wheeler,	Fayette,	268	272	18,627	14,406	103	166	53	95	6
Morrell,	Fayette,	16	\$	320	250	400	12	19	.....	2
Totals, .....	.....	16,933	2,501	465,739	279,549	965	200	565	129	92
W. J. Rainey Coke Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Graves,	Fayette,	2,437	.....	254,622	190,974	467	306	320	1,000	32
Paul,	Fayette,	4,558	2,269	339,877	254,862	489	311	441	.....	40
Fort Hill,	Fayette,	3,015	1,800	290,359	188,250	309	311	306	25	30
Elm Grove,	Fayette,	3,433	4,450	115,460	110,000	218	297	218	250	27
Totals, .....	.....	14,483	4,519	980,548	754,657	1,483	306 3/4	1,285	1,275	129
Mon. River Con. Coal & Coke Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Browns No. 2,	Allegheny,	2,014	824	61,885	.....	.....	77	238	3	19
Lovedale,	Allegheny,	2,577	295	22,179	.....	.....	82	68	2	10
Bellevue Ridge,	Allegheny,	7,890	710	8,885	.....	.....	99	146	3	10
Gospel,	Allegheny,	1,086	400	100,300	.....	.....	212	138	4	4
Totals, .....	.....	3,962	2,229	262,309	.....	.....	117 1/2	588	8	43
W. K. Niver & Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pen Mar No. 1,	Somerset,	1,000	300	97,700	.....	.....	175	116	1	8
Pen Mar No. 2,	Somerset,	2,360	.....	2,500	.....	.....	112	76	.....	.....
Pen Mar No. 3,	Somerset,	2,596	31	6,794	.....	.....	82	72	25	.....
Totals, .....	.....	100,277	321	106,964	.....	.....	92 1/4	264	1	8
Dunbar Furnace Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ferguson,	Fayette,	57,987	2,251	149,704	54,853	226	249	114	96	33
Furnace Mine,	Fayette,	28,261	7,281	95,637	.....	.....	349	40	288	20
Totals, .....	.....	86,248	9,532	185,741	54,853	259	399	184	384	53
Geo. W. Ellsworth Coal Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Forest Hill,	Allegheny,	278,659	322	281,353	.....	.....	263	264	4	17
Merchants' Coal Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Merchants No. 2,	Somerset,	71,915	80	72,762	.....	.....	198	72	3	6
Merchants No. 3,	Somerset,	71,145	74,145	.....	.....	.....	227	85	750	8
Totals, .....	.....	119,060	80	140,919	.....	.....	212 1/2	157	3	14
United Coal Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Unbond,	Allegheny,	182,269	791	18,377	.....	.....	279	173	1	12
Lake Shore Gas Coal Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dravo,	Allegheny,	426,962	.....	110,492	.....	.....	212	129	1	8
Brown & Cochran	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Noble,	Fayette,	3,000	.....	315,000	24,000	300	768	223	1	40

*Totals in this column are averages.

TABLE II—Continued.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employes—tons.	Total production of coal in tons.	Total production of coke in tons.	Number of coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
J. R. Laughrey & Son.	Fayette.	210,000	1,000		211,000			398	100		1	2,000	600	10
Victoria.	Fayette.		2,807	\$98	200,754	146,379	250	310	236		1	2,100	460	28
Juniata Coke Co.	Fayette.			1,300	109,360	65,800	108	308	111			300		12
Jas. Cochran Sons & Co.	Somerset.	9,300		40	113,709			213	168		1	1,500	16	18
Clarissa.	Somerset.	111,479	2,190		92,957			218	147			75	700	17
The Continental Coal Co.	Fayette.	85,936		7,452	48,000			365	50					1
Glen McClaren.	Somerset.	46,000	2,000											
Ursina Coal Mining Co.	Somerset.	53,800			53,800			225	60			300		8
Ursina Nos. 1 and 2.	Somerset.	39,000	386		33,386			226	65			70		5
B. & O.	Somerset.	29,173	25	200	29,398			223	102	1	1	1,000		8
Grassy Run.	Somerset.													
Grace Coal Co.	Somerset.													
Merrill & Walker Coal Co.	Somerset.													
Ponfeigh.	Somerset.													
Stoner Coal Co.	Somerset.	25,859			25,859			290	35			125		2
Berlin.	Somerset.													

*Totals in this column are averages.

Galloway & Clayton.	Somerset.....	19,111				19,111				220	41			200		
Fairview.....																
Pen Mar Coal Co.	Somerset.....	15,800				15,800				124	85			500		7
Standard Nos. 1 and 3.																
Lang Coal and Sand Co.	Fayette.....	15,010	42	4,42		20,652				308	10			302	200	2
Basil.....																
Fred Rowie.	Somerset.....	17,015		60		17,075				132	30			243		2
Mystle.....																
Marietta Coal Co.	Fayette.....	14,880		120		15,000				217	31			100		2
Marietta.....																
Glassport Coal Co.	Allegheny.....	13,013		6,957		19,970				300	23					2
Glassport.....																
Southern Coal Co.	Somerset.....	11,060		200		11,260				129	19	1		29		2
Southern No. 1.		840				840				54	12	1		13		1
Southern No. 2.	Somerset.....	11,200		200		12,100				90½	31	2		42		3
Totals.....																
Rockwood Coal Co.	Somerset.....	6,000				6,000				280	19		1	180	800	1
Rockwood.....																
Kendall Coal Co.	Fayette.....	4,500	40			4,540				57	22					2
Kendall.....																
Blaine Coal Co.	Allegheny.....	2,225	40	25		2,800				137	62					6
Blaine.....																
Vindicator Mining Co.	Somerset.....	2,717		324		3,041				220	11			30		3
Darlington.....																
Grand totals.		6,156,251	209,095	77,456		10,138,957	2,961,734	6,372		225½	12,471	38	71	50,655	65,773	1,234

*Totals in this column are averages.

TABLE II—Continued.

Names of Operators and Collieries.	County.	Number of Boilers.			Horse power.	Tubular.	Horse power.	Total horse power.	Locomotives.			Number steam engines of all classes.	Total horse power.	Number pumps delivering water to surface.	Capacity in gallons per minute.	Quantity delivered to surface per minute—gallons.	Number electric dynamos.	Number air compressors.
		Number of Boilers.							Steam.	Air.	Electric.							
		Cylindrical.	Horse power.	Horse power.														
Pittsburgh Coal Co.	Alle.	9	341	1,977	2,315	13	9	17	1,294	18	6,554	5,790	4	6				
H. C. Frick Coke Co.	West.	10	463	2,710	3,173	16	4	20	1,255	13	1,255	9,391	6	7				
Somerset Coal Co.	Payette.	2	22	1,175	2,249	13	2	11	1,432	11	1,432	1,681	2	1				
Washington Coal and Coke Co.	Somerset.	4	201	1,419	1,616	1	1	11	1,425	11	1,425	1,736	2	2				
W. H. Rainey Coke Co.	Payette.	4	201	1,419	1,616	1	1	11	1,425	11	1,425	1,736	2	2				
W. J. Rainey Coke Co.	Payette.	4	201	1,419	1,616	1	1	11	1,425	11	1,425	1,736	2	2				
Manegheba River Can. Coal and Coke Co.	Allegheny.	2	150	450	1,150	2	2	10	705	12	3,475	1,475	3	1				
W. K. Niver & Co.	Somerset.	2	150	450	1,150	2	2	10	705	12	3,475	1,475	3	1				
Dunbar Furnace Co.	Payette.	10	606	606	606	1	1	8	370	3	370	240	4	4				
Las. W. Ellsworth Coal Co.	Allegheny.	3	883	883	883	1	1	6	380	4	940	330	1	1				
Merchants' Coal Co.	Somerset.	2	125	125	257	2	2	6	380	4	940	330	1	1				
United Coal Co.	Allegheny.	1	150	150	150	1	1	1	300	1	300	125	2	2				
Lake Shore Gas Coal Co.	Allegheny.	1	125	125	125	1	1	1	50	1	50	50	2	2				
Brown & Cochran.	Payette.	1	125	125	125	1	1	1	50	1	50	50	2	2				
J. K. Laughrey & Son.	Payette.	1	125	125	125	1	1	1	50	1	50	50	2	2				
Junata Coke Co.	Payette.	1	125	125	125	1	1	1	50	1	50	50	2	2				
James Cochran Sons & Co.	Payette.	1	125	125	125	1	1	1	50	1	50	50	2	2				
The Continental Coal Co.	Payette.	1	125	125	125	1	1	1	50	1	50	50	2	2				
Indiana Coal Mining Co.	Somerset.	2	200	180	400	1	1	3	437	1	437	440	2	2				
Payette Coal Co.	Payette.	1	125	125	125	1	1	1	50	1	50	50	2	2				
John Meager Sullwagner.	Payette.	1	125	125	125	1	1	1	50	1	50	50	2	2				
Grace Coal Co.	Somerset.	1	25	25	25	1	1	1	30	1	30	20	1	1				
Merrill & Walker Coal Co.	Somerset.	1	25	25	25	1	1	1	30	1	30	20	1	1				
Stoner Coal Co.	Somerset.	1	25	25	25	1	1	1	30	1	30	20	1	1				
Gateway & Clayton.	Somerset.	1	25	25	25	1	1	1	30	1	30	20	1	1				
Pan Mar Coal Co.	Somerset.	1	25	25	25	1	1	1	30	1	30	20	1	1				
Lang Coal and Sand Co.	Payette.	1	40	40	40	1	1	1	30	1	30	20	1	1				
Fred Rowe.	Somerset.	1	40	40	40	1	1	1	30	1	30	20	1	1				

Marlette Coal Co.	Payette																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	</
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TABLE III—Showing the number of employees at each colliery in the Ninth Bituminous district during the year 1902.

Name of Operators and Col- lieries.	County.	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.										Grand total inside and outside.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
		Mine foremen.	Assistant mine foremen.	Pit bosses.	Miners.	Machine runners.	Machine loaders.	Machine scrapers.	Drivers and runners.	Door boys and helpers.	Company men.	All other employees.	Total inside	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	Coke employees.	Bookkeepers and clerks.	All other employees.	Total outside.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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TABLE III—Continued.

Name of Operators and Companies.	County.	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.										Grand total inside and outside.
		Mine foremen.	Assistant mine foremen.	Pit bosses.	Miners.	Machine runners.	Machine loaders.	Machine scrapers.	Drivers and runners.	Door boys and helpers.	Company men.	All other employees.	Total inside.	Superintendents.	(Inside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	Coke employees.	Bookkeepers and clerks.	All other employees.	Total outside.	
Southern Coal Co.	Somerset	1	1	15	15	1	1	1	1	1	1	17	1	1	1	1	1	1	1	1	19	
Southern No. 1.	Somerset	1	1	10	10	1	1	1	1	1	1	11	1	1	1	1	1	1	1	1	12	
Southern No. 2.	Somerset	1	1	25	25	1	1	1	1	1	1	28	1	1	1	1	1	1	1	1	31	
Totals and averages.																						
Rockwood Coal Co.	Somerset.	1	1	12	12	1	1	1	1	1	1	15	1	1	1	1	1	1	1	1	19	
Rockwood.																						
Kendall Coal Co.	Fayette.	1	1	15	15	1	1	1	1	1	1	19	1	1	1	1	1	1	1	1	22	
Kendall.																						
Blaine Coal Co.	Allegheny.	1	1	2	2	2	2	2	2	2	4	24	2	1	1	4	1	1	1	36	39	
Blaine.																						
Viaduct Mining Co.	Somerset.	1	1	7	7	1	1	1	1	1	1	9	1	1	1	1	1	1	1	1	11	
Darlington.																						
Grand totals.		76	18	62	5,502	145	1,787	130	763	127	187	362	9,413	10	51	171	216	1,557	94	831	12,576	

TABLE III—Continued.

Names of Operators.	County.	Number of Days Worked in Each Month.												Total.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
Rockwood Coal Co.,	Somerset.	23	22	21	22	23	24	23	25	23	24	22	25	20
Kendall Coal Co.,	Payette.	.....	.....	.....	.....	.....	.....	.....	.....	.....	15	21	21	37
Blaine Coal Co.,	Allegheny.	.....	.....	.....	.....	.....	.....	12	35	25	26	24	25	137
Vladuet Mining Co.,	Somerset.	18	8	22	13	17	22	15	20	20	24	18	23	230
Grand totals.	.....	1,501	2,697	2,371	2,742	3,011	800	1,225	470	360	618	2,727	2,023	*184.54

* Average 257.

TABLE IV—List of fatal accidents that occurred in and about the mines of the Ninth Bituminous District for the year ending December 31, 1902.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan.	John E. Carlson,	Swede,	Miner,	25	M.	1	2	Whittset,	Payette,	Instantly killed by fall of slate.
13	W. H. Packer,	Welsh,	Miner,	35	S.	1	1	Penitentiary,	Somerset,	Fatally injured by fall of roof in room; died two days after.
Feb.	Mike Pette,	Slav,	Miner,	28	M.	1	1	Trotter,	Payette,	Instantly killed by fall of roof on stumps.
22	John Swickey,	German,	Driver,	33	M.	1	4	Wick Haven,	Payette,	Instantly killed by being run over by cars.
Mar.	Antonia Lemel,	Pole,	Miner,	33	M.	1	1	Pen Mar,	Somerset,	Killed by falling down furnace shaft.
26	John Stenbuck,	American,	Driver,	18	M.	1	1	Jarr,	Westmoreland,	Instantly killed by cars.
3	James Marks,	American,	Miner,	24	M.	1	3	Coal Brook,	Payette,	Killed by fall of roof on coal.
4	George Hrbek,	Slav,	Miner,	26	M.	1	1	Atlas,	Payette,	Instantly killed by fall of roof.
14	John Gidosh,	Slav,	Miner,	37	M.	1	3	Leisnering No. 2,	Payette,	Killed by a fall of roof coal and slate.
14	Stowe Tumbo,	Slav,	Miner,	35	M.	1	2	Elm Grove,	Payette,	Killed by a fall of roof.
17	Martin Grogalak,	Slav,	Miner,	47	M.	1	4	Trotter,	Payette,	Killed by a fall of roof.
18	Peter Cook,	American,	Miner,	49	M.	1	1	Elm Grove,	Payette,	Killed by a fall of coal and slate.
27	Robert Ezzel,	American,	Driver,	29	M.	1	2	Elk Lick No. 2,	Somerset,	Killed by cars.
27	Christopher Monnigard,	Austrian,	Miner,	35	M.	1	1	Dean No. 2,	Allegheny,	Killed by a fall of slate.
31	Mike Pette,	Slav,	Miner,	35	M.	1	1	Perguson,	Payette,	Instantly killed by the cage while passing under it.
5	Steve Chabroski,	Slav,	Cager,	29	M.	1	1	Leisnering No. 3,	Payette,	Killed by a fall of slate and coal.
16	Mike Dienes,	Hungarian,	Miner,	32	M.	1	1	Banning No. 1,	Payette,	Killed by a fall of coal.
17	Thos. H. McGowan,	American,	Miner,	19	M.	1	1	Brown's No. 2,	Allegheny,	Killed by a fall of slate.
24	Charles Bondas,	Hungarian,	Miner,	43	M.	1	5	Leisnering No. 1,	Payette,	Killed by a fall of slate.
31	Mike Symmar,	Slav,	Miner,	35	M.	1	1	Elm Grove,	Payette,	Killed by a fall of slate.
31	Samuel Miller,	American,	Miner,	29	M.	1	1	Summit,	Somerset,	Fatally injured by falling down shaft; died August 23.
June	George Sondmyer,	American,	Superintendent,	44	M.	1	7	Washington No. 1,	Payette,	Instantly killed at bottom of shaft by the cage.
7	Tim Maloney,	Italian,	Miner,	35	M.	1	1	Dravo,	Allegheny,	Killed by a fall of slate.
12	Paul Beckus,	Hungarian,	Miner,	35	M.	1	1	Wick Haven,	Payette,	Killed by a fall of slate.
13	Paul Beckus,	Hungarian,	Miner,	35	M.	1	1	Brown's No. 2,	Allegheny,	Killed by a fall of slate.
16	John Kowalsky,	Hungarian,	Miner,	37	M.	1	1	Southern No. 2,	Payette,	Killed by a fall of coal and slate.
17	John Kowalsky,	Slav,	Miner,	36	M.	1	1	Washington No. 2,	Payette,	Killed by electric shock.
27	Joseph Wagner,	German,	Miner,	14	M.	1	1	Allegheny,	Somerset,	Instantly killed by a fall of coal.
28	Andy Throstach,	Austrian,	Miner,	28	M.	1	1	Furnace,	Payette,	Instantly killed by fall of coal.

TABLE IV—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Aug. 18	Frank Cesar	Austrian	Miner	42	M	1	0	W. Newton shaft.	Westmoreland	Fatally injured by fall of slate.
28	Joseph Shultz	P. le.	Miner	42	M	1	0	Davilson shaft.	Fayette	Instantly killed by a fall of roof.
Sept. 22	Pascalo Sena	Italian	Laborer	49	S	1	0	Brown's No. 2.	Allegheny	Instantly killed by a fall of rope.
Oct. 15	Charles Trumppoc	Hungarian	Miner	55	M	1	4	Whittset.	Fayette	Instantly killed by a fall of coal.
29	John Noko	Hungarian	Miner	30	M	1	1	Leisonring No. 3.	Fayette	Instantly killed by fall of coal.
Nov. 5	Michael Smith	Slav.	Miner	35	M	1	1	Southern No. 1.	Somerset	Instantly killed by fall of coal.
15	Mike Kakala	Slav.	Driver	57	M	1	0	Nellis	Fayette	Instantly killed between wagons.
28	Mike Kohut	Russian	Miner	40	M	1	0	United.	Allegheny	Instantly killed by a fall of roof.
Dec. 12	Enoch Johnston	American	Miner	44	M	1	0	Darr.	Westmoreland	Instantly killed by a fall of slate.

TABLE V.—List of non-fatal accidents that occurred in and about the mines of the Ninth Bituminous District for the year ending December 31, 1902.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan	1 George Bayley.	American.	Miner.	27	Y	Whitsett.	Payette.	Leg broken by a fall of slate.
	2 Harry Ringman.	American.	Miner.	27	M	Hamilton.	Somers.	Leg and arm broken by a fall of slate.
	3 Martin Zarlatto.	American.	Miner.	23	M	Hamilton, No. 2.	Allegheny.	Jaw bone broken by a fall of slate.
	4 Emilie Winterhalter.	German.	Culver.	22	Y	Henry's No. 1.	Payette.	Injured by wagon against rib.
	5 Robert Phinck.	American.	Driver.	18	Y	Casselman.	Somers.	Injured by fall of slate.
	6 Simon Finner.	American.	Miner.	22	Y	Lehigh.	Somers.	Leg broken by a fall of slate.
	7 William Fairchild.	American.	Trap rigger.	22	Y	Victoria.	Payette.	Leg broken by a fall of slate.
	8 John McBurnet.	Irish.	Miner.	27	Y	Eastport.	Payette.	Leg broken by a fall of slate.
	9 William H. Mass.	American.	Miner.	27	M	Somerset.	Allegheny.	Arm broken by a fall of slate.
	10 George York.	Irish.	Miner.	27	M	Whitsett.	Somers.	Leg broken by a fall of slate.
	11 Lewis Parrall.	Irish.	Miner.	46	M	Forrest Hill.	Allegheny.	Injured by a fall of slate.
Feb	12 John Puchoska.	American.	Miner.	22	Y	Southern No. 2.	Somers.	Leg broken by slate while knocking a post out.
	13 Fritz Scholt.	Polish.	Miner.	24	Y	Lehigh.	Allegheny.	Badly injured by a fall of slate.
	14 Peter Macell.	Slav.	Miner.	25	M	Lehigh No. 1.	Payette.	Pelvis bone broken and otherwise injured by fall of slate.
	15 Mike Shacht.	Slav.	Miner.	29	M	Lehigh No. 1.	Payette.	Leg broken and scalp wound by fall of roof.
	16 Thomas Fair.	American.	Driver.	29	M	Lehigh No. 2.	Somers.	Leg broken by fall of coal and slate.
Mar	17 Charles A. Hagber.	American.	Engineer.	27	Y	Lehigh.	Payette.	Collar bone broken, caught between wagon and rib.
	18 Joseph C. Leander.	Polish.	Miner.	29	Y	Lehigh No. 2.	Payette.	Leg broken by stepping from the cage before it landed.
	19 Andrew S. Leander.	American.	Miner.	29	Y	Lehigh No. 2.	Payette.	Leg broken by a fall of slate.
	20 Andy Reed.	American.	Miner.	35	M	Lehigh No. 2.	Payette.	Leg and arm broken by a fall of coal.
	21 Charles Suther.	American.	Miner.	22	Y	Lehigh No. 2.	Payette.	Collar bone broken by being knocked off cage.
	22 Jack Mendenhall.	American.	Miner.	22	Y	Lehigh No. 2.	Payette.	Body injured by a fall of slate.
	23 John H. Le.	Slav.	Miner.	45	M	Lehigh No. 2.	Payette.	Body injured by a fall of slate.
April	24 W. H. Le.	American.	Miner.	47	M	Lehigh No. 2.	Payette.	Leg broken by wagon knocking out a post.
	25 Sam Hawes.	English.	Miner.	38	M	Lehigh No. 2.	Payette.	Body injured by a fall of slate.
	26 John H. Le.	Slav.	Miner.	45	M	Lehigh No. 2.	Payette.	Leg broken by a fall of slate.
	27 John H. Le.	Slav.	Miner.	45	M	Lehigh No. 2.	Payette.	Arm broken by a wagon running over it.

TABLE V--Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
May	Charles Ritter.	American.	Driver.	19	M.	Summit.	Somerset.	Badly injured by falling down shaft.
	John McKinley.	Slav.	Miner.	45	M.	Berry.	Payette.	Injured by a fall of slate.
	Thomas F. Morgan.	Irish.	Driver.	37	M.	Leisenring No. 3.	Somerset.	Hip dislocated by cars.
	John Trumpey.	American.	Driver.	21	M.	Elk Lick No. 2.	Somerset.	Injured by being caught between wagon and rib.
June	John Lindiman.	American.	Miner.	28	M.	Elk Lick No. 2.	Somerset.	Burned by powder.
	Mike Zartna.	Slav.	Miner.	38	M.	West Newton shaft.	Westmoreland.	Leg broken by a fall of slate.
	Mike Wassal.	Pole.	Miner.	32	M.	Allegheny.	Somerset.	Badly injured by a fall of coal.
	Domenic Roase.	Italian.	Miner.	26	M.	Nellie.	Payette.	Leg broken by cars.
	August Grier.	American.	Driver.	17	M.	West Newton shaft.	Westmoreland.	Foot broken by cars.
	Joseph Samber.	Pole.	Miner.	22	M.	Merchants' No. 2.	Somerset.	Leg broken by fall of coal.
	Thomas Hill.	American.	Miner.	29	M.	Enterprise No. 1.	Somerset.	Leg broken by fall of slate.
	Robert Thompson.	American.	Driver.	30	M.	Nellie.	Payette.	Leg broken by cars.
	Robert Thompson.	English.	Driver.	30	M.	Nellie.	Payette.	Leg broken by cars.
	Thomas F. Morgan.	Irish.	Driver.	27	M.	Leisenring No. 3.	Payette.	Hip dislocated by cars running off the track.
July	John Skerron.	Pole.	Miner.	27	M.	Rockwood.	Somerset.	Injured by a fall of slate.
	John Skerachin.	Italian.	Miner.	25	M.	Banning No. 1.	Payette.	Leg broken by a fall of slate.
	Mike Tein.	Slav.	Miner.	25	M.	Forrest Hill.	Allegheny.	Head badly injured by a fall of slate.
	George Verhagel.	Pole.	Miner.	30	M.	Forrest Hill.	Allegheny.	Badly injured by fall of coal.
	Frank Livengood.	American.	Miner.	27	M.	Merchants' No. 2.	Somerset.	Injured by fall of coal striking a post.
	Loke Cullen.	Irish.	Trip rider.	27	M.	Leisenring No. 3.	Payette.	Hip dislocated by engine against rib.
	Mathew Fan.	American.	Miner.	26	M.	Merchants' No. 2.	Somerset.	Arm broken by fall of coal.
	Linton Mabe.	Hungarian.	Miner.	27	M.	West Newton shaft.	Westmoreland.	Three toes cut off by a fall of slate.
	Charles Gratehouse.	American.	Driver.	24	M.	P. & M. Mar.	Somerset.	Arm broken by being caught under trip.
	Gomer Williams.	American.	Laborer.	13	M.	Allegheny.	Somerset.	Spine dislocated by falling from car, out-side.
Aug.	John Visey.	Hungarian.	Driver.	31	M.	Leisenring No. 3.	Payette.	Arm and rib broken by two drivers coal-trip.
	Steve Clomhaus.	Slav.	Miner.	21	M.	Nellie.	Payette.	Leg broken by a fall of slate.
Sept.	Samuel F. Essel.	American.	Miner.	26	M.	Elk Lick No. 1.	Somerset.	Sealy wound by a fall of coal.
	Thomas R. Haugh.	English.	Miner.	25	M.	Furnace.	Payette.	Foot crushed off by fall of slate.
	Frankel Haugh.	American.	Laborer.	22	M.	Atlas.	Westmoreland.	Foot cut off by mining machine.
	Stephen Koelr.	Slav.	Miner.	21	M.	Atlas.	Payette.	Thigh fractured by fall of coal.
	William Bach.	American.	Miner.	37	M.	Lordsdale.	Allegheny.	Arm broken by cars.

Yr.	Name	Age	Sex	Occupation	Place of Birth	Date of Injury	Cause of Injury	Location of Injury	Result of Injury	Remarks
Oct.	Thomas Barker	36	M.	Miner	American	1898	Leg broken by a fall of coal.	Leg broken by a fall of coal.	Leg broken by a fall of coal.	Leg broken by a fall of coal.
20	Steve Barry	35	M.	Miner	Slav	1898	Leg broken by a fall of slate.	Leg broken by a fall of slate.	Leg broken by a fall of slate.	Leg broken by a fall of slate.
21	John McArthur	35	M.	Miner	American	1898	Collar bone dislocated by cars.	Collar bone dislocated by cars.	Collar bone dislocated by cars.	Collar bone dislocated by cars.
21	Charles McArthur	35	M.	Driver	American	1898	Injured by running against wagon.	Injured by running against wagon.	Injured by running against wagon.	Injured by running against wagon.
22	John Hargrave Jones	42	M.	Miner	Russian	1898	Badly injured by slate.	Badly injured by slate.	Badly injured by slate.	Badly injured by slate.
23	John Vataha	22	M.	Miner	Hungarian	1898	Leg broken by fall of coal.	Leg broken by fall of coal.	Leg broken by fall of coal.	Leg broken by fall of coal.
23	Michael Vana	24	M.	Miner	Slav	1898	Collar bone broken by fall of roof.	Collar bone broken by fall of roof.	Collar bone broken by fall of roof.	Collar bone broken by fall of roof.
23	William Harding	25	M.	Driver	American	1898	Injured by a fall of slate.	Injured by a fall of slate.	Injured by a fall of slate.	Injured by a fall of slate.
24	Harry Harenta	25	M.	Miner	Italian	1898	Leg broken by a fall of slate.	Leg broken by a fall of slate.	Leg broken by a fall of slate.	Leg broken by a fall of slate.
24	John Koski	15	M.	Miner	Austrian	1898	Leg broken by a fall of slate.	Leg broken by a fall of slate.	Leg broken by a fall of slate.	Leg broken by a fall of slate.
29	Andrew Pisko	43	M.	Miner	Austrian	1898	Arm broken by a fall of slate.	Arm broken by a fall of slate.	Arm broken by a fall of slate.	Arm broken by a fall of slate.
2	Mark Omlan	38	M.	Miner	Polish	1898	Arm broken by a fall of slate.	Arm broken by a fall of slate.	Arm broken by a fall of slate.	Arm broken by a fall of slate.



Tenth Bituminous District.

BEDFORD, BLAIR, CAMBRIA, HUNTINGDON AND INDIANA COUNTIES.

Altoona, Pa., March 24, 1903.

Hon. James W. Latta, Secretary of Internal Affairs, Harrisburg, Pa.

Sir: I have the honor of submitting my annual report for the year 1902. There were 121 mines in operation during the year; an increase of 14 over last year. So great was the demand for coal during the year that old mines which had been abandoned many years ago as being unprofitable, were again put in operation. Two mines were abandoned during the year, the coal having been worked out.

The total production of coal for 1902 was 6,680,786 tons, an increase of 1,658,441 over the preceding year.

The number of accidents that occurred during the year was 67. Of this number 24 were fatal; leaving 18 widows and 48 orphans. There were three accidents, each resulting in the loss of two lives. Four lives were lost in opening new mines before any coal was shipped from them. From careful investigation I find that 29 per cent. of the fatal accidents were unavoidable, while 71 per cent. were due to carelessness on the part of the victims themselves.

It is sad to think that men will risk their lives in disobeying the law which was enacted for their own protection; but such is the case, and to reduce the number of accidents, a more rigid discipline must be maintained by mine foremen in charge of the lives and safety of those employed in and about the mines.

The report includes the annual tables on production, classification of labor, accidents, machine mining, ventilations, etc.

All of which is respectfully submitted.

JOSEPH WILLIAMS,
Mine Inspector.

Summary of Statistics for 1902.

Number of mines in district,	121
Number of mines in operation during 1902,	121
Number of tons of coal produced,	6,680,786
Number of tons shipped to market,	5,829,220
Number of tons sold at mines to local trade,	42,645
Number of tons consumed at mines in generating steam and heat,	101,956
Number of coke ovens in the district,	1,767
Number of coke ovens in operation during 1902,	1,767
Number of tons of coke produced,	534,366
Number of tons of coal used in manufacture of coke,	748,112
Number of tons produced by pick mining,	3,611,212
Number of tons produced by compressed air machines,...	1,814,001
Number of tons produced by electrical machines,	1,255,573
Number of persons employed inside the mines,	9,232
Number of persons employed outside, including coke workers,	1,561
Number of persons employed at manufacture of coke,...	583
Number of fatal accidents inside the mines,	23
Number of tons produced for each fatal accident inside, ..	290,469
Number of persons employed per fatal accident inside, ..	401.4
Number of fatal accidents outside,	1
Number of persons employed per fatal accident outside, ..	1,561
Number of wives made widows by fatal accidents,	18
Number of children orphaned by fatal accidents,	48
Number of non-fatal accidents inside of mines,	40
Number of persons employed per non-fatal accident in- side,	230.8
Number of non-fatal accidents outside,	3
Number of persons employed per non-fatal accident out- side,	520.3
Number of electric motors used inside,	30
Number of fans used for ventilation,	57
Number of furnaces used for ventilation,	40
Number of gaseous mines in operation during 1902, ...	1
Number of non-gaseous mines in operation during 1902, ..	126
Number of new mines opened in 1902,	14
Number of old mines abandoned during 1902,	2

A. Production of Coal During the Year 1902.

Names of Companies.	Tons.
Beech Creek Coal and Coke Co.,	930,445
Webster Coal and Coke Co.,	793,425
Barnes & Tucker,	385,345
Altoona Coal and Coke Co.,	313,905
Rockhill Iron and Coal Co.,	227,248
Empire Coal Company,	204,023
Sterling Coal Co.,	196,200
Maderia Hill Coal Mining Co.,	188,505
Cresson and Clearfield Coal and Coke Co.,	185,808
Crescent Coal Mining Co.,	177,246
John Langdon,	125,609
Pennsylvania Coal and Coke Company,	225,543
W. H. Sweet,	81,376
Morrisdale Coal Co.,	57,075
Colonial Iron Co.,	122,213
Huntingdon Coal Company,	25,586
Jones & Tappan,	24,113
E. Eichelberger & Co.,	43,116
Walnut Run Coal Mining Co.,	63,545
Cymbria Coal Mining Co.,	85,044
Duncan & Spangler,	120,500
Clearfield Bituminous Coal Corporation,	236,915
Taylor & McCoy,	184,835
Vinton Colliery Co.,	95,095
Oak Ridge Coal and Coke Co.,	89,160
Black Lick Coal Mining Co.,	84,977
E. R. Jackman & Co.,	83,796
Glen White Lumber and Coal Co.,	63,075
Shreeves Run Coal Co.,	62,667
Allport Coal Co.,	117,000
American Union Coal Co.,	52,943
A. J. Black,	29,410
P. J. Gates & Bro.,	40,175
J. J. McGonigal,	28,510
Spangler Coal and Coke Co.,	32,923
Rich Hill Coal Co.,	23,503
El Mora Coal Company,	55,100
Bradley & Reed,	50,060
Greenwich Coal and Coke Co.,	37,096
C. D. Reed,	16,136
Kelly & Flanagan,	13,173
Puritan Coal Mining Co.,	19,600

Lincoln Coal Mining Co.,	12,771
Patton Clay Manufacturing Co.,	10,535
S. V. Davis & Co.,	10,477
W. A. Gould & Bro.,	12,283
Coalport Coal Co.,	7,302
Ivory Hill Coal Co.,	6,400
Wm. Parsall,	1,100
Warner Coal Co.,	3,182
Lackawanna Coal and Coke Co.,	111,795
Rembrandt Peale,	274,853
Nant Y Glo Coal Mining Co.,	70,585
Jos. E. Thropp,	64,970
Saxton Furnace Co.,	50,320
Davis Spencer & Co.,	24,654
Deringer Bros.,	21,880
Daugherty Coal Co.,	5,651
Total,	<hr/> 6,680,786 <hr/>

TABLE B—Continued.

Names of Companies.	Number of lives lost inside.	Number of lives lost outside.	Total number of lives lost.	Number severely injured inside.	Number severely injured outside.	Total number severely injured.	Tons of coal produced per each life lost inside.	Tons of coal produced per serious injury inside.	Number employees inside of mines.	Number employees outside of mines.	Total number employed.	Number of employees inside for each life lost.	Number of employees inside for each severe injury.	Number of employees outside for each life lost.	Number of employees outside for each severe injury.
Brennandt, Peale,	1	.....	1	.....	274,823	302	77	229	.....	202	.....	.....
Los E. Throop,	1	.....	1	.....	70,885	106	174	180	.....	105	.....	.....
Saxton Furnace Co.,	1	1	.....	.....	68	56	124	.....	.....	.....	56
Deringer Bros.,	1	.....	1	.....	21,880	29	1	30	.....	29	.....	.....
Totals and averages,	23	1	24	40	3	43	240,469	167,020	9,232	1,561	10,793	401.4	230.8	1,561	520.3

D. Classification of Non-fatal Accidents for the Year 1902.

	Inside of Mines.										Outside of Mines.							Grand total.		
	By Falls of			By Falling into				By blasts, etc.	Powder and dynamite.	Smothered by gas.	By explosion of gas.	By mine cars.	Total inside.	By cars.	By machinery.	By suffocation.	By boiler explosions.		Miscellaneous causes.	Total outside.
	Coal.	Slate.	Roof.	Shafts.	Slopes.	Manways, oreasts, etc.	(Crushed at batteries.														By mules.	Suffocated by coal, etc.	Miscellaneous causes.
January.	1		1										1							
February.			2																	
March.	1																			
April.																				
May.																				
June.	3		1																	
July.			1																	
August.	3		1																	
September.	2	1							1											
October.	4		3						1											
November.	3		1						1											
December.			1						1											
Totals.	14	1	10	11					2				40	1	2				3	43

E. Occupations of Employees Killed or Fatally Injured Inside and Outside the Mines of the Tenth Bituminous District During 1902.

Months.	Inside.											Outside.										Grand total.
	Mine foremen.	Assistant mine foremen.	Pitro bosses.	Miners.	Machine runners.	Machine loaders.	Machine scrapers.	Drivers and runners.	Door boys and helpers.	Company men.	All other employes.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	Coke employes.	Book-keepers and clerks.	All other employes.	Total outside.		
February.	1																					
March.																						
April.																						
May.																						
June.																						
July.				1																		
August.					1																	
September.																						
October.																						
November.																						
December.																						
Totals	1	1		19	1					1		22		1						1	24	

F. Occupations of Employees Severely Injured Inside and Outside the Mines of the Tenth Bituminous District During 1902.

Months.	Inside.										Outside.										(Grand total.
	Mine foremen.	Assistant mine foremen.	Fire bosses.	Miners.	Machine runners.	Machine loaders.	Machine scrapers.	Drivers and runners.	Door boys and helpers.	(Company men.	All other employees.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	Coke employees.	Book-keepers and clerks.	All other employees.	Total outside.	
January.																					
February.																					
March.																					
April.																					
May.																					
June.																					
July.																					
August.																					
September.																					
October.																					
November.																					
December.																					
Totals.	15			1	6	2	1	6	2	2		40				2			1	3	43
	15			1	6	2	1	6	2	2		40				2			1	3	43
	15			1	6	2	1	6	2	2		40				2			1	3	43
	15			1	6	2	1	6	2	2		40				2			1	3	43
	15			1	6	2	1	6	2	2		40				2			1	3	43
	15			1	6	2	1	6	2	2		40				2			1	3	43
	15			1	6	2	1	6	2	2		40				2			1	3	43
	15			1	6	2	1	6	2	2		40				2			1	3	43
	15			1	6	2	1	6	2	2		40				2			1	3	43
	15			1	6	2	1	6	2	2		40				2			1	3	43
	15			1	6	2	1	6	2	2		40				2			1	3	43
	15			1	6	2	1	6	2	2		40				2			1	3	43
	15			1	6	2	1	6	2	2		40				2			1	3	43
	15			1	6	2	1	6	2	2		40				2			1	3	43
	15			1	6	2	1	6	2	2		40				2			1	3	43
	15			1	6	2	1	6	2	2		40				2			1	3	43
	15			1	6	2	1	6	2	2		40				2			1	3	43
	15			1	6	2	1	6	2	2		40				2			1	3	43
	15			1	6	2	1	6	2	2		40				2			1	3	43
	15			1	6	2	1	6	2	2		40				2			1	3	43
	15			1	6	2	1	6	2	2		40				2			1	3	43
	15			1	6	2	1	6	2	2		40				2			1	3	43
	15			1	6	2	1	6	2	2		40				2			1	3	43
	15			1	6	2	1	6	2	2		40				2			1	3	43
	15			1	6	2	1	6	2	2		40				2			1	3	43
	15			1	6	2	1	6	2	2		40				2			1	3	43
	15			1	6	2	1	6	2	2		40				2			1	3	43
	15			1	6	2	1	6	2	2		40				2			1	3	43
	15			1	6	2	1	6	2	2		40				2			1	3	43
	15			1	6	2	1	6	2	2		40				2			1	3	43
	15			1	6	2	1	6	2	2		40				2			1	3	43
	15			1	6	2	1	6	2	2		40				2			1	3	43
	15			1	6	2	1	6	2	2		40				2			1	3	43
	15			1	6	2	1	6	2	2		40				2			1	3	43
	15			1	6	2	1	6	2	2		40				2			1	3	43
	15			1	6	2	1	6	2	2		40				2			1	3	43
	15			1	6	2	1	6	2	2		40				2			1	3	43
	15			1	6	2	1	6	2	2		40				2			1	3	43
	15			1	6	2	1	6	2	2		40				2			1	3	43
	15			1	6	2	1	6	2	2		40				2			1	3	43
	15			1	6	2	1	6	2	2		40		</							

G. Nationality of Employees Killed or Fatally Injured Inside and Outside the Mines During 1902.

	Americans.	English.	Irish.	Poles.	Hungarians.	Italians.	Slavs.	Lithuanians.	Russians.	Belgians.	Total.
February,		1							5	3	9
March,							1				1
April,	1							1			2
June,	1										1
July,	1										1
August,	1			1							2
October,		2	1		3						6
November,	2						2	1			5
December,	1			1		3					4
Totals,	6	3	1	2	3	2	3	2	1	1	21

H. Nationality of Employees Severely Injured Inside and Outside the Mines During 1902.

	Americans.	Welsh.	Scottish.	Irish.	Poles.	Italians.	Slavs.	Australians.	Swedes.	French.	Totals.
January,	1						1				2
February,	2								1		3
March,	1				1						2
April,	1			1				1			3
May,	3										3
June,		1		1	1						3
July,						1					1
August,	5		1				1		1		8
September,	3						1	1			5
October,			3								3
November,	2	1					1				4
December,					1	1					2
Totals,	17	2	4	2	3	3	6	2	2	2	35

Barnes & Tucker.											
Lancashire No. 6.	Drift.	Non-gas.	Fan.	16	3.5	2.00	Brazil.	Steam.	28,450	56	330
Lancashire No. 8.	Slope.	Non-gas.	Fan.						30,000	136	280
Lancashire No. 9.	Drift.	Non-gas.	Furnace.					30		82	
Lancashire No. 3.	Slope.	Non-gas.	Furnace.							141	220
Lancashire No. 7.	Drift.	Non-gas.	Fan.	16	3.5	2.00	Brazil.	Electric.	31,920	22,600	
Lancashire No. 11.	Drift.	Non-gas.	Fan.					38		51	400
Juniata.	Drift.	Non-gas.	Furnace.						18,500	30	500
Altona Coal and Coke Co.											
Delaware.	Drift.	Non-gas.	Fan.	15	4.5	2.00	Brazil.	Steam.	63,000	371	200
Horseshoe.	Drift.	Non-gas.	Furnace.					45	20,000	68	200
Rockhill Iron and Coal Co.											
Robertsdale slope.	Slope.	Non-gas.	Fan.	16	4.5	1.00	Brazil.	Steam.	63,000	291	300
Woodvale shaft.	shaft.	Non-gas.	Fan.	16	4.5	1.00	Brazil.	Steam.	32,200	115	275
Empire Coal Co.											
Empire.	Drift.	Non-gas.	Fan.	10	2		Silene.	Steam.	33,300	294	120
Eclipse.	Drift.	Non-gas.	Furnace.					36		40	200
Sterling Coal Co.											
Sterling No. 1.	Drift.	Non-gas.	Fan.	12	4	1.25	Patteman.		21,440	118	150
Emma No. 2.	Drift.	Non-gas.	Furnace.	7	1.5	.75	Silene.		15,800	144	100
Emma No. 3.	Drift.	Non-gas.	Furnace.						3,500	106	450
Emma No. 4.	Drift.	Non-gas.	Furnace.						20,000	62	200
El Mena.	Drift.	Non-gas.	Fan.	7	1.5	.75	Silene.		16,450	87	170
Crescent Coal Mining Co.											
Crescent No. 1.	Drift.	Non-gas.	Fan.	12	3.5	1.00	Brazil.	Steam.	18,000	67	200
Crescent No. 2.	Drift.	Non-gas.	Fan.	12	3.5	1.00	Brazil.		13,410	96	200
Crescent No. 3.	Drift.	Non-gas.	Furnace.					20	4,300	41	100
Crescent No. 4.	Drift.	Non-gas.	Fan.						3,200	31	100
Crescent No. 7.	Drift.	Non-gas.	Furnace.					15	4,300	35	120
John Lancaster											
Canfield No. 1.	Drift.	Non-gas.	Natural.						1,000	61	100
Canfield No. 2.	Drift.	Non-gas.	Natural.						4,500	9	300
Canfield No. 3.	Drift.	Non-gas.	Fan.	6	1.5		Idaho.	Steam.	11,700	65	120
Columbia Iron Co.											
Yorkshire No. 1.	Slope.	Non-gas.	Natural.						10,000	51	200
Yorkshire No. 2.	Drift.	Non-gas.	Fan.	12	3	1.00	Patteman.		12,400	71	110
Yorkshire No. 3.	Drift.	Non-gas.	Fan.	12	3	1.00	Patteman.			40	
W. H. Scott											
Grant No. 1.	Drift.	Non-gas.	Natural.						2,500	17	200
Grant No. 2.	Drift.	Non-gas.	Natural.						2,000	25	200
Grant No. 3.	Drift.	Non-gas.	Natural.					17	1,000	10	100
Grant No. 4.	Drift.	Non-gas.	Natural.						1,000	78	50
M. C. Coal and Coke Co.											
Empire No. 1.	Slope.	Non-gas.	Fan.	12	3	1.00	Patteman.		1,000	60	200
Empire No. 2.	Slope.	Non-gas.	Furnace.						1,000	27	

TABLE I—Continued.

Names of Operators and Mines.	Kind of opening.	Gasous or non-gasous.	Method of ventilation.	Diameter and width of fan in feet.	Water gauge developed—in inches.	Name of fan.	Power used.	Area of furnace bars in square feet.	Number of air splits of air currents.	Number of cubic feet of air per minute entering the mine at inlet.	Total quantity of air per minute circulating in all the splits in cubic feet.	Number of cubic feet per minute passing out at outlet.	Number of persons employed inside.	Average number of cubic feet per minute provided for each person.
Lackawanna Coal and Coke Co. Lackawanna No. 1.	Drift.	Non-gas.	Fan.	12 x 1.8	.75	Disc.	Electric.			28,000	1,700	27,000	91	180
Lackawanna No. 2.	Drift.	Non-gas.	Fan.	6 x 1	.75	Disc.	Electric.			29,570		30,000	26	900
Lackawanna No. 3.	Slope.	Non-gas.	*							10,000		10,050	53	200
Lackawanna No. 4.	Slope.	Non-gas.	*										50	
Oak Ridge Coal and Coke Co. Oak Ridge.	Slope.	Non-gas.	Fan.	6 x 2.5	2.5	Robinson.	Steam.			26,500		26,427	79	350
Black Lick Coal Mining Co. Big Bend.	Drift.	Non-gas.	Fan.	8 x 1.5	.75	Sline.	Steam.			11,000		9,500	126	75
Spangler Coal and Coke Co. Guselo.	Drift.	Non-gas.	Fan.	7 x 1.5	.75	Sline.	Steam.			17,325		17,500	41	400
Taylor & McCoy. Gallitzin shaft.	Shaft.	Non-gas.	Fan.	12 x 4	1.00	Brazil.	Steam.		3	30,000	27,000	27,300	223	130
Chesfield Coal Corporation. West Branch.	Drift.	Gaseous.	Fan.	10 x 5	3.5	Capell.	Steam.		4	52,000	39,000	53,000	250	200
Allport Coal Co. Allport No. 1.	Drift.	Non-gas.	Furnace.		1.00			72	3	22,500	19,400	22,500	83	240
Vinton Colliery Co. Vinton.	Drift.	Non-gas.	Fan.	12 x 1.3	.73	Sline.	Steam.			39,000		23,800	117	200
F. R. Jackman & Co. Manchester.	Drift.	Non-gas.	Fan.	7 x 1.5	.7	Sline.	Steam.			22,200		22,150	114	150
Glen White L. and C. Co. Glen White.	Slope.	Non-gas.	Fan.	10 x 3	1.00	Brazil.	Steam.			15,720		16,000	88	150

*Not installed.

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TABLE I—Continued.

Names of Operators and Mines.	Kind of opening.	Gasous or non-gaseous.	Method of ventilation.	Diameter and width of fan in feet.	Water gauge developed—in inches.	Name of fan.	Power used.	Area of furnace bars in square feet.	Number of air splits of air currents.	Number of cubic feet of air per minute entering the mine at inlet.	Total quantity of air per minute circulating in all the splits in cubic feet.	Number of cubic feet per minute passing out at out- let.	Number of persons employed inside.	Average number of cubic feet per minute of cubic feet per person.
Daugherty Coal Co. Daugherty,	Drift,....	Non-gas.	Natural,	.....	.....	.....	.....	.....	.....	11,000	.....	12,000	11	500
Ivory Hill Coal Mining Co. Ivory Hill No. 1,	Drift,....	Non-gas.	Furnace,	.....	.....	.....	.....	25	.....	6,500	.....	6,000	31	150
Duval,	Slope,....	Non-gas.	Fan,....	7 x 2.5	.....	.....	.....	.....	.....	.....	.....	.....	27	.....
Huntingdon Coal Co. Delaware No. 1,	Drift,....	Non-gas.	Natural,	16 x 4	.....	Brazil, .....	.....	.....	.....	5,400	.....	5,350	77	75
Delaware No. 2,	Drift,....	Non-gas.	Natural,	↑	.....	.....	.....	.....	.....	5,400	.....	5,350	42	75
Jones & Tappan. Hickes No. 2,	Drift,....	Non-gas.	Fan,....	6 x 2.5	.....	Pioneer,	Steam, .....	.....	.....	16,866	.....	16,600	35	500
Shreeve's Run Coal Co. Warner,	Drift,....	Non-gas.	Furnace,	.....	.....	.....	.....	25	.....	9,100	.....	9,000	79	100
American Union Coal Co. Cambria No. 3,	Shaft,....	Non-gas.	Fan,....	10 x 3.5	1.00	Brazil,	Steam, .....	.....	.....	26,882	.....	26,500	94	200
Black's,	Drift,....	Non-gas.	Furnace,	.....	.....	.....	.....	15	.....	4,200	.....	4,100	50	80
J. P. Gates & Bro. Fulton,	Slope,....	Non-gas.	Fan,....	6 x 2.5	Brazil,	Steam,	17,080	17,000	53	330
J. J. McGonigal. Patton No. 3,	Drift,....	Non-gas.	Furnace,	30	10,500	10,450	31	250

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tiding installed.

[illegible]

J. Names of mines using coal cutting machines, names of machines, power used, geological and local names of seams, thickest and thinnest seams where machines are used, and the approximate number of tons produced by machines during 1902.

Name and number of machines in use.	Total machines used.	Power used by machines.	Geological and local name of seam.	Average thickness in inches.			Height of seam in inches.		Approximate number of tons produced by machines.
				Thickest.	Thinnest.				
Each Creek Coal and Coke Co.									
Parlow No. 3.	8	Compressed air.	C. Prime.	50	54	46	114,000		
Parlow No. 4.	3	Compressed air.	C. Prime.	42	48	36	71,000		
Parlow No. 5.	3	Compressed air.	C. Prime.	45	54	36	71,000		
Parlow No. 6.	6	Compressed air.	C. Prime.	33	54	52	54,000		
Parlow No. 7.	11	Compressed air.	C. Prime.	54	56	52	260,000		
Parlow No. 8.	4	Electric.	C. Prime.	50	56	52	30,000		
Columbia No. 12.	5	Compressed air.	C. Prime.	46	50	42	10,000		
Moshannon No. 13.									
Webster Coal and Coke Co.									
Webster No. 9.	6	Electric.	E. or Lemon.	50	52	42	9,440		
Webster No. 10.	13	Electric.	E. or Lemon.	50	54	48	225,000		
Webster No. 11.	5	Electric.	E. or Lemon.	50	56	48	104,567		
Webster No. 12.	5	Electric.	D. or Moshannon.	48	55	40	78,057		
Webster No. 13.	9	Compressed air.	E. or Miller.	48	52	46	31,624		
Webster No. 14.	6	Electric.	E. or Lemon.	50	54	48	99,770		
Pennsylvania Coal and Coke Co.									
Pennsylvania No. 1.	4	Electric.	E. or Lemon.	48	50	46	51,359		
Pennsylvania No. 2.	12	Compressed air.	D. or Moshannon.	50	54	46	101,214		
Pennsylvania Nos. 3 and 6.	6	Electric.	D. or Moshannon.	44	48	42	8,348		
Alcona Coal and Coke Co.									
Dolaney.	12	Compressed air.	E. or Lemon.	47	46	48	29,778		
Harnes & Tucker.									
Lancashire No. 2.	6	Compressed air.	D. or Moshannon.	48	52	54	52,505		
Lancashire No. 6.	1	Electric.	D. or Moshannon.	52	54	50	9,455		
Lancashire No. 8.	4	Electric.	D. or Moshannon.	52	56	48	85,103		

Remarks on Accidents.

February 20th, Frank Delaux was killed in Robertsdale slope by rock falling upon him. He put himself in a dangerous position to knock out a prop from under a large piece of rock and when the prop was struck out the rock fell upon him, killing him instantly.

February 10th, Carl Pereton was fatally injured in Dean No. 8 slope by a piece of slate falling upon him, on which he had been working in order to advance his roadway.

March 15th, James Highms was instantly killed by loaded cars breaking loose from the ascending trip on the slope in the Oak Ridge mine. Highms was in charge of the mine and was switching a loaded car off the slope, when the cars that broke loose ran over him.

April 22d, John Pallock was instantly killed in Flanigan No. 8 mine by a fall of coal which he was undermining. He was working near the crop. The space of his mining was not over six feet wide.

June 3d, Andrew L. Warring was instantly killed by a fall of slate. He was taking out a pillar between two haulage roads. The ripping had been taken down on each road, leaving the two sides and one end of the draw slate free. Warring worked the pillar from the point, a distance of 18 feet back, without putting any props to support the draw slate. His attention was called to his danger by the driver, who advised him before the accident occurred, to set some props under the slate, which he promised to do later. A miner working beside him also advised him to set props under the roof.

June 5th, Simon Plosta was fatally injured in Webster No. 13 mine by a fall of coal while undermining it. Plosta and his partner had finished the mining and taken the sprags out. His partner was preparing a hole to blast the coal down, when Plosta again went under the coal to do more mining, when it fell upon him. He died on July 24th.

July 23d, Ernest Monroe was instantly killed while sinking a slope in Lackawanna No. 4 mine. He was striking upon a drill, putting a hole in the bottoms, when a stone fell upon him. The same stone brushed the side of the man who works with him. At 7.30 A. M. they had tried to take the stone down, and again at 11 A. M. they tried and failed; the stone fell at 1.30 P. M.

August 2d, John Henchman was instantly killed while riding in a trip of cars down the slope in Pennsylvania No. 1 mine. He worked on the night turn, and the mine foreman noticed him, in company with some other night men, waiting outside the mine just before the day shift quit work. He went to them and told them that they were not allowed to ride in the cars down the slope. Fifteen minutes afterwards Henchman jumped into the trip; the cars jumped the

track, struck out three sets of timbers, burying Henchman in the car.

August 28th, John McIntyre was instantly killed in the Warner mine by an explosion of dynamite. A shaft was being sunk into the mine and about 15 feet of the distance had been driven up from inside. McIntyre went into this hole for the purpose of finding out if it was not about through, before leaving the mine. At that time a blast of two sticks of dynamite was fired from above the charge, which being but 2 feet from being through, killed McIntyre. He knew that the men worked above, and they had been warned that no one was to enter the place, so that the inquest placed the blame upon McIntyre.

October 1st, John Patton was instantly killed on the slope in Penn'a No. 1. He was descending the slope to his work, when a trip of empty cars was being pulled up the slope, which caught him. It was nearer for him to reach his place of work by going through the manway.

October 11th, Wm. Patterson was instantly killed in Delaney mine by a fall of rock. He was drawing pillars. The roof had fallen during the night, and when Patterson commenced to mine the face of his pillar, he liberated a large mass of roof that had been hanging after the fall. The accident was unavoidable.

October 11th, Mikeal Cowash and Charl Remish were instantly killed at the bottom of the hoisting shaft of Lackawanna No. 4 mine. There were five men employed at taking down rock. A hole had been drilled preparatory to blasting. There was much water coming down the sides of the shaft, making it difficult to discern any joint in the rock, and it sounded solid. While one of the men was preparing a blast, the two victims took out a prop, when the rock fell.

October 31st, Edward Lemm was fatally injured while riding between loaded cars in the Fisher mine. The driver had warned him not to ride on the cars, but he replied that he would take the risk. He was caught between the roof and the top of the car. Before he died he said there was no one to blame but himself.

November 7th, Paul Kasup was instantly killed in Superior No. 2 mine by a fall of coal while undermining. He failed to sprag the coal.

November 14th, Paul Hertell was fatally injured in Lackawanna mine by a blast of dynamite. He was charging a hole in the bottoms, and in putting the charge to the back of the hole, he used an iron tamping drill, exploding the charge. He claimed to be experienced in rock work, and held a miner's certificate from the Anthracite region.

November 15th, Geo. Andrisack was instantly killed in Moshannon

No. 13 mine by a slab of rock. A prop had been put under it with a tie placed under the prop parallel with the road, for the purpose of breaking the refuse bottom coal in the roadway. After the shot had been fired, the prop was taken out, no attention having been paid to the roof. It fell, breaking his neck.

November 21st, Patrick Kennedy and Michael Brennan were fatally burned by a blown out shot igniting coal dust in Hickes No. 2 mine. They had turned a room and were blasting the coal out of the solid. Several shots had been fired during the forenoon so that the heading men protested they were unable to work. Kennedy and Brennan had not long been working soft coal. They used a 3-inch drill to bore the holes, which they had brought from the Anthracite region. About noon they fired a shot in the corner of the face of the room, which was drilled at an angle of 30 degrees into the line of the rib on the solid into this hole; the heading men estimated there was placed about four pounds of powder. When the shot was fired, the heading men were 100 feet outside the room on the heading. Kennedy went inside the room on the heading, and Brennan outside the room. The face of the heading was 100 feet in advance of the room. The flames from the shot, fed by the fine dry coal dust, extended 100 feet outside the room along the heading, slightly burning one of the heading men at that point. Both Kennedy and Brennan were enveloped in flame. Kennedy died the same evening, and the following morning Brennan's suffering was ended by death. Explosive gas had never been known to be generated in this mine, but the coal dust is very dry.

November 24th, Mike Olear was killed in Lancashire No. 11 mine while undermining. No sprag could be found to have been used, and it is thought from the position in which he was found, that he was mining out a stump that had been left to support the coal, a method which so many miners prefer to setting sprags, but which increases the danger, because the sprags can always be taken out while the miner stands.

December 6th, Domnick and Francisco Derwitcher, brothers, were instantly killed in Superior No. 2 mine by a treacherous pot in the roof falling upon them. Francisco, who worked with his father in another part of the mine, was sent by him to his brother to borrow a shot of powder. He had gotten the powder, and was sitting upon a heap of coal, his brother and his brother's partner sitting beside him, when the stone fell upon the brothers, the third man escaping without injury. I found upon investigation, that a cutter ran along one side, while a slip ran along the other, which could not have been seen before the stone fell. The man who escaped injury, testified that he had tried the roof a short time before and found it solid. A cross-bar was at the outside which was an unsafe protection, the

place being only 8 feet wide and 7 feet from the cross bar to the face, and the roof sounding strong, they could reasonably have believed themselves safe.

December 13th, Chas. Krebs was instantly killed by a boiler explosion at the boiler plant of Webster No. 12-13 mines. The accident occurred during the noon hour. He had just cleaned one side of the fires, and water was being put into the boiler. The boiler was cylindrical, 34 feet long, 36 inches diameter. The plate was 9.32 inches thick, with no evidence of blistering. The fracture was made around the shell as though a line had been drawn around it. The testimony given was that there was plenty of water in the boiler, and that the safety valve worked properly at 75 pounds. The boiler was made by the Scranton Manufacturing Co. in 1896, and had been in use at this plant about two years. It was insured by the American Casualty Co., and inspected by them.

December 22d, Wasel Hudah was instantly killed in Cambria No. 3 by a stone falling from the roof, breaking his neck. He was taking down a bad piece of roof on the roadway, and had loaded it into the car. The drivers were waiting for him to clear the road, but in his eagerness to commence, he failed to notice that the roof over the side was dangerous. When the drivers started their trips, Hudah stepped on the side directly under the bad roof. He was in a stooping posture when the stone fell.

Description of Mines in Bedford County.

Kearney Mines.—The ventilation in the Plane mine was poor during the latter part of the year. A shaft is being sunk at the face or the workings, which will improve the conditions.

The Slope mine was re-opened and found to be in good condition, the water having been pumped out.

Cambria No. 3 Mine.—The condition of this mine has been improved during the year by cleaning up and timbering about 1,400 feet of the manway, and re-laying the main haulage road with heavier rails.

Mines on Sandy Run.

Cambria No. 1 is now working the coal in the basin of a large trough. It was in fair condition during the year.

Crescent No. 1 was in a fair condition. Pillars are now being taken out.

Mines on Six Mile Run.

Judith is a new mine opened during the year. The inclination of the seam is from 25 degrees to 90 degrees and many different

methods are used to work the coal. It was in fair condition. Manholes along the roadway for the safety of the men were needed, and upon my request, were at once made. The fan from Durham No. 1 mine has been removed to this mine.

Durham No. 1.—This mine is nearly exhausted, there being but little pillar coal left. It was in good condition during the year.

Durham No. 2.—This mine was found to be in a fair condition. Ventilation and drainage fair.

Duval Mine.—During the latter part of the year the water was pumped out of this mine, and it is now in operation, after having been filled with water about 18 months.

Cunard shaft was upon one of my visits in poor condition, the ventilation and drainage were poor, caused by insufficient boiler power. A new boiler has been added, which puts the mine in a fair condition.

Cunard Slope.—The manway of this mine was not in condition for traveling. On one of my visits, at my request, the mine foreman had it put in fair condition. The drainage and ventilation are good.

Crescent No. 5 mine.—Is a new mine opened in the Fulton seam, the Barnet seam having been worked above it many years ago. Upon one of my visits it was found that the strata over the Barnet was weighing and crushing the roof over the Fulton. I requested that care be exercised in leaving sufficient pillars to protect the mine and employes. The rooms and entries are to be rooms 18 feet and entries 9 feet wide.

Crescent No. 2.—A 16-foot fan and a rope haulage system were installed at this mine during the year, which have greatly improved its condition.

Beacon mine was in a fair condition, except on one visit, when I found the air poor, and impure oil being used by the drivers. A letter was sent to each of the drivers from this office, threatening prosecution, which had the desired effect, and the ventilation was improved by making a connection with Cunard shaft.

Delaware Nos. 1 and 2 are old mines which were re-opened and are connected. A 16-foot Brazil fan is being installed to ventilate them.

Fulton mine was on each visit in a good condition.

Crescent No. 3 is working about 20 men, the operator is trying to get an outlet at the face of the work, which will put the mine in fair condition. On one of my visits the air needed improvement.

Warner mine has been improved during the year by a new shaft sunk near the face of the working. It was in very fair condition.

Mines in Huntingdon County.

Robertsdale slope was in a fair condition. The fire which existed more than a year in the old workings is extinguished. The carbonic

acid and the need of oxygen had the effect of smothering it. Much credit is due the management for the care taken.

Woodvale shaft was in fair condition, although it was idle part of the year from the water overpowering the pumps.

Black's mine was in fair condition. During the year a connection was made to another opening.

Carbon was in fair condition.

Fisher mine was improved by making a new air-course from the furnace to the face of the workings.

Ocean No. 2 was working only 28 men during the year and was in fair condition.

Ocean No. 3 was in a good condition, ventilation and drainage being good.

Ocean No. 1 worked 12 men and was in fair condition.

Benedict Nos. 1 and 2 were in a fair condition when inspected. They are old mines that have been re-opened during the year.

Melrose.—Ventilation and drainage were good during the year.

Hickes Nos. 1 and 2.—Number of men in No. 1 mine was reduced so that during the latter part of the year it did not come under the law. Number two has rope haulage, also a fan. A slope is being driven to the bottom of the basin. Ventilation is good and work was done to improve the drainage.

Mines in Blair County.

Glen White.—The old mine is now being worked in drawing the pillars; it was in very fair condition on each visit.

Horseshoe.—This mine was greatly improved during the year by driving a heading and straightening the long haulage road; the ventilation and drainage were fair.

Bradley Nos. 1, 2 and 3 were in a fair condition for the number of men employed.

Webster No. 11 was in a fair condition.

Pennsylvania No. 1 was in very fair condition. A new electric plant was installed, and the coal is being mined by an electric machine. Improvement has been made in the landing at the Tipple, also a safety appliance to guard against cars running down the slope.

Mines in Cambria County.

Delaney mine was in a good condition during the year. The hoisting engine was unable to do the work required, and a larger one has been installed.

Gallitzin shaft was improved in its ventilation, and in very fair condition when visited.

Webster No. 10.—A 20-foot Guibal fan was installed during the year, and the main air-way stoppings were cemented, which made great improvement in the ventilation.

Webster No. 9.—There has been considerable improvement in the renewing of the shaft timbers and head-frame, also the air-courses and haulage roads have been enlarged at a considerable cost, as the work had to be done in sand rock, and it is by no means completed yet.

Black Lick Branch.

Ivory Hill.—In addition to the drift, working the D seam, a slope has been put down to the B seam and a hoisting plant installed.

Webster No. 14 on my last visit was in a very fair condition. I requested a shaft be put down on the dip workings, which they have promised to do.

Nant Y Glo No. 1.—Ventilation and drainage were good, but there has been considerable irregularity in extracting pillars in rooms.

Lincoln.—A shaft has been sunk and a furnace put in, which has placed the mine in very fair condition.

Big Bend.—The ventilation is fair, but the drainage is poor.

Vinton Colliery.—A 12-foot Stine fan was installed during the year, and the mine is in a good condition.

Lackawanna No. 1 was in fair condition.

Lackawanna No. 2.—A 10-foot Stine fan has replaced the 6-foot fan, and the air-way from the fan to the back of the workings was enlarged, which improved the ventilation.

Lackawanna No. 3.—Is a new mine, opened in Indiana county, with two shafts and a slope. It is being opened with a view to be worked on the long wall system. The coal is mined by machines, loaded into the car by conveyers, and dumped from revolving tripplers into two large bins at the bottom of the shaft to be hoisted up in a skiff.

Lackawanna No. 4 is opened in Indiana county upon the same principle as No. 3, but at this plant a washer has been erected that will receive the coal direct from the bins at the bottom of the shaft on a conveyer. The coal from No. 3 shaft will also be taken to this washer, which will have a capacity of 2,500 tons per day. The coal, after being washed, will be shipped to the company's coking plant at Buffalo, N. Y.

The inside workings of both mines are in a good condition, with large areas in road ways and air ways. The methods in use are a great departure from the general system of working, and are being carefully watched by those interested in mining.

Mines on the Susquehanna Branch.

Black Diamond is a small mine working the D seam. It was found in a fair condition.

ElMora.—The ventilation in this mine in some places was deficient. On my last visit, they were nearly through making a connection between Nos. 1 and 2 openings, near the face of the workings in No. 1, which would place the mine in good condition.

Nant Y Glo No. 2.—Trouble is being experienced in getting the second opening connected. Upon my last visit, I requested that the work be done without delay. The mine foreman, also the superintendent, informed me that they would use all efforts to have it done, which I have since learned they are doing.

Sterling No. 1.—On my last visit I found that they had gotten through the troublesome ground, and were opening up inside. The condition at the face was poor, but from what I learned, it would not be long before the conditions would be improved.

Emma No. 3 was in a fair condition.

Emma No. 4.—I found the grade inside the mine was dangerous, and as the traveling way was not according to law, I requested that proper means be provided for traveling, which were at once started.

Emma No. 5 was in good condition.

Bluebaker No. 13 was in fair condition during the year.

Susquehanna mine was in fair condition.

Victor No. 4 was in fair condition.

Mancher mine was in fair condition.

Victor Nos. 2 and 3 mines were in fair condition.

Eclipse mine was in fair condition, its rock roll having been passed and they were in good coal. Ventilation and drainage were good.

Spangler No. 1 was in fair condition during the year.

West Branch was in good condition. The mine has been improved by driving the fourth right heading outside, which makes two inlets. The ventilation and drainage were good.

Spangler No. 2 was found in good condition.

Delta Mine.—The ventilation was not up to the requirements of the law in all parts of the mine. There was sufficient volume produced by the fan, but the leakage was so great, that on my last visit I demanded that it be remedied, and sufficient air taken to the face of the workings, and the matter was taken up at once by the superintendent and mine foreman.

Walnut Run No. 1.—This mine has nearly finished working the D seam, and an opening has been made in the E seam, which will continue the operation. It was in fair condition during the year.

Cymbria No. 1 was in fair condition. An effort has been made for

some time to drive one of the headings outside, which will greatly improve the condition of the mine.

Cymbria No. 2 was worked during the last six months of the year, and was in fair condition for the number of men employed.

Manion mine was in good condition.

Allport No. 1 was in good condition.

Juniata.—About 30 men are at work drawing pillars; mine was in fair condition.

Lancashire No. 7 was improved during the year by a new opening driven across the face of the cross headings, and a 16-foot Brazil fan installed, which gives sufficient ventilation for Nos. 7 and 11 mines.

Lancashire No. 8 was improved during the year by repairing the stoppings. They promised on my last visit to divide the volume, so as to comply with the law, which will help the ventilation. Drainage was poor.

Lancashire No. 6 was in good condition.

Lancashire No. 9 worked only 22 men for a short time during the year, and was in fair condition.

Lancashire No. 4 is abandoned.

Lancashire No. 3 was in fair condition, except that on one visit I found that there was no pretence of conducting the air to the working faces, so I refused to allow several places to be worked until the law had been complied with.

Walnut Run No. 2 was found to be in a fair condition. The furnace was unable to do the work required and has since been enlarged, but the old working is so far in, that the only remedy is to put a shaft down near the face of the work.

Empire mine was in good condition.

Pennsylvania No. 5 is a new mine being opened in the D seam in an extensive tract of coal. Two openings, each on the three entry system which being connected, are ventilated by a 12-foot fan were in good condition.

Penn'a No. 6 is also a new mine being opened on the opposite side of the creek from No. 5, and is also working the D seam.

Greenwich Nos. 1 and 2 mines.—Number one is a drift, and was in very fair condition. Number two is a slope opened during the year. The opening is made just inside the Indiana county line, though the coal worked is in Cambria county.

Mines Near Patton.

Victor No. 12 is a new mine, which commenced shipping coal about the first of the year. It was in very fair condition.

Ashcroft mine was in poor condition. The ventilation being deficient, I ordered two headings at the far end of the work to be shut

down until sufficient air should be circulated to put them in a healthful condition. I have since been informed by the Superintendent that a 12-foot Brazil fan had been ordered for this mine.

Columbia. This mine is now connected with Ashcroft on the left, and Flanagan No. 8 has worked the coal in front of it. It was in fair condition on my last visit.

Pardee No. 5 was in good condition.

Pardee No. 3 was in fair condition.

Patton Clay mine is now in a good condition. In the early part of the year I was requested by the men working in this mine to visit it. As the mining law does not include the inspection of clay mines, I visited the mine to learn if it came under the act. I found 22 persons employed inside this mine, 6 men being employed mining coal. I communicated my information to the Chief of the Bureau of Mines, upon which he decided that the mine came under the law. I then wrote the Superintendent requesting of him to put the mine in compliance with the act governing bituminous mines. In reply I received a letter protesting against being subject to the act; but upon consultation with their attorney, they decided to comply with the law, and a Brazil fan was installed, and doors and brattices were put up, placing the mine in a good condition.

Moshannon.—Considerable improvement has been made in this mine during the year. An air compressor for mining coal and preparation for electric haulage, and a 12-foot fan have been installed. On my last visit I found preparations being made to split the air so as to comply with the law, which when done, will put the mine in good condition.

Flanagan No. 8.—This mine has been improved during the year. A shaft was sunk at the face of the workings which improved the ventilation.

Flanagan No. 9 has been abandoned during the year.

Pardee No. 6 was in good condition.

Pardee No. 4 was in good condition.

Pardee No. 7 is a new slope mine. A 12-foot fan has been installed and is opened on the three entry system to work the C prime seam directly beneath the D, which is being worked by Pardee No. 4. The mine is in good condition.

Mines Near Hastings.

Puritan No. 4 is in a fair condition. A shaft has been put down which will improve its condition.

Penn'a No. 3 was improved during the latter part of the year by adding more boiler power to the plant. In the early part of the year the ventilation was not sufficient, and the mine now needs a larger

fan which will produce a larger volume of air and allow the air to be divided into two separate currents.

Rich Hill was in good condition.

Oak Ridge is now in good condition. A six foot Robinson fan has been installed during the year.

Webster No. 12 has been improved during the year by repairing the stoppings along the main road by facing them with cement.

The mine still needs improvement in ventilation. The operators have promised to get an opening outside, near the working faces. This would place the mine in good condition.

Webster No. 13.—This mine was improved by repairing the stopping along the main air-way, and was on my last visit in a fair condition.

Mines Along the C. & C. Division.

Webster No. 7.—Considerable improvement was made during the year at this mine. A new opening was made for motor haulage, doing away with the slope, and a new air-course is being constructed, a fan installed outside the mine, the tipples changed, and additional ovens being built. When this work is completed, the mine will be in good condition.

Superior No. 2.—This mine has been in a fair condition for the number of men employed. A new opening is being made to work the coal that cannot be reached by the old opening.

Dean No. 10 was in good condition.

Dean No. 9 was operated during the latter part of the year, and some pillar coal taken out for the ovens. I did not visit it.

Dean No. 8 was in fair condition during the year.

Van Ormer was in fair condition during the year.

Flinton was in a poor condition when visited; a shaft has since been put down at the face of the work.

Beaver Dam.—A small number of men worked during the last two months of the year, but I did not visit it.

Mines on the Beech Creek and Altoona R. R.

Kelley mine was found to be in a fair condition.

Daugherty mine was on my first visit in poor condition. On my last visit the condition had been improved.

TABLE I—Showing names of operators, railroads, etc., and location of collieries in the Tenth Bituminous District for the year 1902.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Beech Creek C. & C. Co.	Cambria.....	W. C. Lingle.....	Patton.....	W. C. Lingle.....	Patton.....	New York Central R. R.
Furbee No. 3.....	Cambria.....	W. C. Lingle.....	Patton.....	W. C. Lingle.....	Patton.....	New York Central R. R.
Furbee No. 4.....	Cambria.....	W. C. Lingle.....	Patton.....	W. C. Lingle.....	Patton.....	New York Central R. R.
Furbee No. 5.....	Cambria.....	W. C. Lingle.....	Patton.....	W. C. Lingle.....	Patton.....	New York Central R. R.
Furbee No. 6.....	Cambria.....	W. C. Lingle.....	Patton.....	W. C. Lingle.....	Patton.....	New York Central R. R.
Furbee No. 7.....	Cambria.....	W. C. Lingle.....	Patton.....	W. C. Lingle.....	Patton.....	New York Central R. R.
Furbee No. 8.....	Cambria.....	W. C. Lingle.....	Patton.....	W. C. Lingle.....	Patton.....	New York Central R. R.
Furbee No. 9.....	Cambria.....	W. C. Lingle.....	Patton.....	W. C. Lingle.....	Patton.....	New York Central R. R.
Furbee No. 10.....	Cambria.....	W. C. Lingle.....	Patton.....	W. C. Lingle.....	Patton.....	New York Central R. R.
Furbee No. 11.....	Cambria.....	W. C. Lingle.....	Patton.....	W. C. Lingle.....	Patton.....	New York Central R. R.
Furbee No. 12.....	Cambria.....	W. C. Lingle.....	Patton.....	W. C. Lingle.....	Patton.....	New York Central R. R.
Furbee No. 13.....	Cambria.....	W. C. Lingle.....	Patton.....	W. C. Lingle.....	Patton.....	New York Central R. R.
Furbee No. 14.....	Cambria.....	W. C. Lingle.....	Patton.....	W. C. Lingle.....	Patton.....	New York Central R. R.
Webster C. & C. Co.	Cambria.....	E. T. Conner.....	Cresson.....	W. C. Shiffer.....	Gallitzin.....	Pennsylvania Railroad.
Webster No. 7.....	Cambria.....	E. T. Conner.....	Cresson.....	W. C. Shiffer.....	Gallitzin.....	Pennsylvania Railroad.
Webster No. 8.....	Cambria.....	E. T. Conner.....	Cresson.....	W. C. Shiffer.....	Gallitzin.....	Pennsylvania Railroad.
Webster No. 9.....	Cambria.....	E. T. Conner.....	Cresson.....	W. C. Shiffer.....	Gallitzin.....	Pennsylvania Railroad.
Webster No. 10.....	Cambria.....	E. T. Conner.....	Cresson.....	W. C. Shiffer.....	Gallitzin.....	Pennsylvania Railroad.
Webster No. 11.....	Cambria.....	E. T. Conner.....	Cresson.....	W. C. Shiffer.....	Gallitzin.....	Pennsylvania Railroad.
Webster No. 12.....	Cambria.....	E. T. Conner.....	Cresson.....	W. C. Shiffer.....	Gallitzin.....	Pennsylvania Railroad.
Webster No. 13.....	Cambria.....	E. T. Conner.....	Cresson.....	W. C. Shiffer.....	Gallitzin.....	Pennsylvania Railroad.
Webster No. 14.....	Cambria.....	E. T. Conner.....	Cresson.....	W. C. Shiffer.....	Gallitzin.....	Pennsylvania Railroad.
Harrow & Tucker	Cambria.....	J. T. Slinger.....	Barnesboro.....	Richard Ashcroft.....	Barnesboro.....	Pennsylvania Railroad.
Lanesboro No. 1.....	Cambria.....	J. T. Slinger.....	Barnesboro.....	Richard Ashcroft.....	Barnesboro.....	Pennsylvania Railroad.
Lanesboro No. 2.....	Cambria.....	J. T. Slinger.....	Barnesboro.....	Richard Ashcroft.....	Barnesboro.....	Pennsylvania Railroad.
Lanesboro No. 3.....	Cambria.....	J. T. Slinger.....	Barnesboro.....	Richard Ashcroft.....	Barnesboro.....	Pennsylvania Railroad.
Lanesboro No. 4.....	Cambria.....	J. T. Slinger.....	Barnesboro.....	Richard Ashcroft.....	Barnesboro.....	Pennsylvania Railroad.
Lanesboro No. 5.....	Cambria.....	J. T. Slinger.....	Barnesboro.....	Richard Ashcroft.....	Barnesboro.....	Pennsylvania Railroad.
Lanesboro No. 6.....	Cambria.....	J. T. Slinger.....	Barnesboro.....	Richard Ashcroft.....	Barnesboro.....	Pennsylvania Railroad.
Lanesboro No. 7.....	Cambria.....	J. T. Slinger.....	Barnesboro.....	Richard Ashcroft.....	Barnesboro.....	Pennsylvania Railroad.
Lanesboro No. 8.....	Cambria.....	J. T. Slinger.....	Barnesboro.....	Richard Ashcroft.....	Barnesboro.....	Pennsylvania Railroad.
Lanesboro No. 9.....	Cambria.....	J. T. Slinger.....	Barnesboro.....	Richard Ashcroft.....	Barnesboro.....	Pennsylvania Railroad.
Lanesboro No. 10.....	Cambria.....	J. T. Slinger.....	Barnesboro.....	Richard Ashcroft.....	Barnesboro.....	Pennsylvania Railroad.
Lanesboro No. 11.....	Cambria.....	J. T. Slinger.....	Barnesboro.....	Richard Ashcroft.....	Barnesboro.....	Pennsylvania Railroad.
Lanesboro No. 12.....	Cambria.....	J. T. Slinger.....	Barnesboro.....	Richard Ashcroft.....	Barnesboro.....	Pennsylvania Railroad.
Lanesboro No. 13.....	Cambria.....	J. T. Slinger.....	Barnesboro.....	Richard Ashcroft.....	Barnesboro.....	Pennsylvania Railroad.
Lanesboro No. 14.....	Cambria.....	J. T. Slinger.....	Barnesboro.....	Richard Ashcroft.....	Barnesboro.....	Pennsylvania Railroad.
Albion C. & C. Co.	Cambria.....	John Loeck.....	Albion.....	John Munro.....	Condon.....	Pennsylvania Railroad.
Delaney.....	Cambria.....	John Loeck.....	Albion.....	John Munro.....	Condon.....	Pennsylvania Railroad.
Horse Shaw.....	Cambria.....	John Loeck.....	Albion.....	John Munro.....	Condon.....	Pennsylvania Railroad.
Rockhill Iron & Coal Co.	Huntingdon.....	L. L. Logan.....	Robertsville.....	J. W. Pischhoff.....	Robertsville.....	East Broad Top R. R.
Rockhill Shaft.....	Huntingdon.....	L. L. Logan.....	Robertsville.....	J. W. Pischhoff.....	Robertsville.....	East Broad Top R. R.
Woodvale Shaft.....	Huntingdon.....	L. L. Logan.....	Robertsville.....	J. W. Pischhoff.....	Robertsville.....	East Broad Top R. R.
Empire Coal Co.	Cambria.....	R. A. Shillingford.....	Clearfield.....	Clearfield.....	Clearfield.....	New York Central R. R.
Empire.....	Cambria.....	R. A. Shillingford.....	Clearfield.....	Clearfield.....	Clearfield.....	New York Central R. R.
Empire.....	Cambria.....	R. A. Shillingford.....	Clearfield.....	Clearfield.....	Clearfield.....	New York Central R. R.

TABLE I—Continued.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Sterling Coal Co. Sterling No. 3, Sterling No. 4, Sterling No. 5, Sterling No. 1.	Cambria.....	J. B. Reed.....	El Mora.....	T. H. Huddy.....	El Mora.....	Pennsylvania Railroad.
	Cambria.....	J. B. Reed.....	El Mora.....	T. H. Huddy.....	El Mora.....	Pennsylvania Railroad.
	Cambria.....	J. B. Reed.....	El Mora.....	T. H. Huddy.....	El Mora.....	Pennsylvania Railroad.
	Cambria.....	J. B. Reed.....	El Mora.....	T. H. Huddy.....	El Mora.....	Pennsylvania Railroad.
Madera Hill Coal Mining Co. Madden, Spangler No. 1, Spangler No. 2.	Cambria.....	Fred Betzels.....	Clearfield.....	Thos. Scollon.....	Barnesboro.....	Pennsylvania Railroad.
	Cambria.....	Fred Betzels.....	Clearfield.....	John Mc'ormick.....	Barnesboro.....	Pennsylvania Railroad.
	Cambria.....	Fred Betzels.....	Clearfield.....	John McGowen.....	Barnesboro.....	Pennsylvania Railroad.
	Cambria.....	Fred Betzels.....	Clearfield.....	John McGowen.....	Barnesboro.....	Pennsylvania Railroad.
Cresson & Clearfield C. & C. Co. Dean No. 8, Dean No. 9, Dean No. 10.	Cambria.....	P. H. Walls.....	Philadelphia.....	F. P. McFarland.....	Frugality.....	Pennsylvania Railroad.
	Cambria.....	P. H. Walls.....	Philadelphia.....	F. P. McFarland.....	Frugality.....	Pennsylvania Railroad.
	Cambria.....	P. H. Walls.....	Philadelphia.....	F. P. McFarland.....	Frugality.....	Pennsylvania Railroad.
	Cambria.....	P. H. Walls.....	Philadelphia.....	F. P. McFarland.....	Frugality.....	Pennsylvania Railroad.
Crescent Coal Mining Co. Crescent No. 1, Crescent No. 2, Crescent No. 3, Crescent No. 4, Crescent No. 5, Crescent No. 6.	Bedford.....	John Langdon.....	Huntingdon.....	.....	.....	H. & B. T. R. R.
	Bedford.....	John Langdon.....	Huntingdon.....	.....	.....	H. & B. T. R. R.
	Bedford.....	John Langdon.....	Huntingdon.....	.....	.....	H. & B. T. R. R.
	Bedford.....	John Langdon.....	Huntingdon.....	.....	.....	H. & B. T. R. R.
John Langdon. Cambria No. 1, Chevington No. 1, Chevington No. 2.	Bedford.....	John Langdon.....	Huntingdon.....	.....	.....	H. & B. T. R. R.
	Bedford.....	John Langdon.....	Huntingdon.....	.....	.....	H. & B. T. R. R.
	Bedford.....	John Langdon.....	Huntingdon.....	.....	.....	H. & B. T. R. R.
	Bedford.....	John Langdon.....	Huntingdon.....	.....	.....	H. & B. T. R. R.
Pennsylvania C. & C. Co. Pennsylvania No. 1, Pennsylvania No. 3, Pennsylvania Nos. 5 and 6.	Blair.....	Wm. M. Smith.....	Ebensburg.....	M. B. Courtwright.....	Ebensburg.....	Pennsylvania Railroad.
	Cambria.....	Wm. M. Smith.....	Ebensburg.....	M. B. Courtwright.....	Ebensburg.....	Pennsylvania Railroad.
	Cambria.....	Wm. M. Smith.....	Ebensburg.....	M. B. Courtwright.....	Ebensburg.....	Pennsylvania Railroad.
	Cambria.....	Wm. M. Smith.....	Ebensburg.....	M. B. Courtwright.....	Ebensburg.....	Pennsylvania Railroad.
Colonial Iron Co. Durham No. 1, Durham No. 2, Durham No. 3, Durham No. 4, Durham No. 5, Durham No. 6.	Bedford.....	Wm. Lauder.....	Ridlesburg.....	J. C. Allen.....	Ridlesburg.....	H. & B. T. R. R.
	Bedford.....	Wm. Lauder.....	Ridlesburg.....	J. C. Allen.....	Ridlesburg.....	H. & B. T. R. R.
	Bedford.....	Wm. Lauder.....	Ridlesburg.....	J. C. Allen.....	Ridlesburg.....	H. & B. T. R. R.
	Bedford.....	Wm. Lauder.....	Ridlesburg.....	J. C. Allen.....	Ridlesburg.....	H. & B. T. R. R.
W. H. Sweet. Ocean No. 1, Ocean No. 2, Ocean No. 3, Carbon No. 1.	Huntingdon.....	W. H. Sweet.....	Dudley.....	.....	.....	H. & B. T. R. R.
	Huntingdon.....	W. H. Sweet.....	Dudley.....	.....	.....	H. & B. T. R. R.
	Huntingdon.....	W. H. Sweet.....	Dudley.....	.....	.....	H. & B. T. R. R.
	Huntingdon.....	W. H. Sweet.....	Dudley.....	.....	.....	H. & B. T. R. R.

Clear, Bit. Coal Corporation. West Branch,	Cambria,	R. A. Shillingford, ..	Clearfield, ..	Tim. McCarthy, ..	Barnesboro,	New York Central R. R.
Taylor & McCoy. Gallitzin shaft,	Cambria,	T. E. Dipper,	Gallitzin, .....	.....	.....	Pennsylvania Railroad.
Vinton Colliery Co. Vinton Colliery,	Cambria,	G. A. Ware,	Vintondale, ..	.....	.....	Pennsylvania Railroad.
Oak Ridge C. & C. Co. Oak Ridge,	Cambria,	H. J. VanDusen, ..	Hastings, .....	.....	.....	Pennsylvania Railroad.
Black Lick Coal Mining Co. Bag Bend,	Cambria, .....	.....	.....	A. J. McHugh, ..	Exedit,	Pennsylvania Railroad.
E. R. Jackman & Co. Manchester,	Cambria,	E. R. Jackman,	Carrolltown, ..	E. C. Morris, ..	Carrolltown, ..	New York Central R. R.
Glen White L. & C. Co. Glen White,	Blair,	Val Eichelbaub, ..	Glen White, ..	.....	.....	Pennsylvania Railroad.
Shreve Run Coal Co. Warner,	Bedford,	Wm. M. Smith,	Ebensburg, ..	Jas. M. McIntyre, ..	Six Mile Run,	H. & B. T. R. R.
Albport Coal Co. Albport No. 1,	Cambria,	J. H. Albport,	Hastings, .....	.....	.....	Pennsylvania Railroad.
American Union Coal Co. Cambria No. 2,	Bedford,	Geo. I. Cant,	Huntingdon, ..	.....	.....	H. & B. T. R. R.
Blacks, A. J. Black. Fulton,	Huntingdon, ..	A. J. Black,	Broad Top City, ..	Isaac Cook,	Broad Top City,	H. & B. T. R. R.
J. P. Gates & Bro. Fulton,	Bedford,	J. P. Gates,	Philadelphia, ..	Samuel Buckley, ..	Six Mile Run,	H. & B. T. R. R.
J. J. McGinnis Fulton No. 3,	Cambria,	J. J. McGinnis, ..	Carrolltown, ..	.....	.....	New York Central R. R.
Lack Coal & Coke Co. Lackawanna No. 1 and 2 Lackawanna No. 3 Lackawanna No. 4	Cambria, Indiana, Indiana,	C. R. Claghorn, C. R. Claghorn, C. R. Claghorn, ..	Webster, Webster, Webster,	W. P. Morgan, W. P. Morgan, G. R. DeGroot, ..	Vintondale, Webster, Webster,	Pennsylvania Railroad Pennsylvania Railroad Pennsylvania Railroad
Bendish & Padgug Blair No. 1 Blair No. 2 Blair No. 3 Blair No. 4 Blair No. 5 Blair No. 6	Cambria, Cambria, Cambria, Cambria, Cambria,	Alex. B. Dunsmore, Alex. B. Dunsmore, Alex. B. Dunsmore, Alex. B. Dunsmore, Alex. B. Dunsmore,	Glen Ritchy, Glen Ritchy, Glen Ritchy, ..	Arch. Dunsmore, Arch. Dunsmore, Arch. Dunsmore, Arch. Dunsmore,	St. Benedict, St. Benedict, St. Benedict, St. Benedict,	New York Central R. R. New York Central R. R. New York Central R. R. New York Central R. R.
Jas. E. Thropp, Jr. Kearney No. 1 and 2 Saxton Partridge Co. McIntosh,	Bedford, Huntingdon, ..	Jas. E. Thropp, Jr., A. C. Korman, ..	Port,	R. H. Kay,	Kearney,	H. & B. T. R. R.
.....	.....	.....	Saxton,	John Morris, ..	Tupley,	H. & B. T. R. R.

TABLE I—Continued.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Javis, Spencer & Co.	Cambria.....	E. F. Spencer,	Van Orner, .....	.....	.....	Pennsylvania Railroad.
Van Orner,	Cambria.....	W. Deringer,	Spangler,	W. Deringer,	Spangler,	Pennsylvania Railroad.
Susquehanna,	Cambria.....	A. A. Stevens,	Tyrone,	Geo. P. Bell,	Coalport,	Pennsylvania Railroad.
Coalport Coal Co.	Cambria.....	John W. Daugherty,	Altoona, .....	.....	.....	P. J. E. & E. R. R.
Superior No. 2,	Cambria.....	James E. Fitch,	Flinton, .....	.....	.....	Pennsylvania Railroad.
Daugherty Coal Co.	Cambria.....	Gilbert McIntyre, ..	Six Mile Run, ...	.....	.....	H. & B. T. R. R.
Wm. P. Parsall.	Cambria.....	James A. McLain,...	Spangler, .....	.....	.....	Pennsylvania Railroad.
Beaver Dam,	Cambria.....	E. W. Samuel, M. D.	Mt. Carmel,	H. M. McAlarney,	Hastings,	Pennsylvania Railroad.
Warner Coal Mining Co.	Bedford.....	John B. Reed,	El Mora, .....	.....	.....	Pennsylvania Railroad.
Duvall,	Bedford.....	M. W. Saxman,	Latrobe,	Thos. Estep,	Garmans Mills, ..	Pennsylvania Railroad.
Gussie,	Cambria.....	Warren Reed,	Dudly, .....	.....	.....	H. & B. T. R. R.
Rich Hill Coal Co.	Cambria.....	Chas. H. Kelly,	Altoona, .....	.....	.....	P. J. E. & E. R. R.
Rich Hill,	Cambria.....	C. F. Fraser,	Altoona, .....	.....	.....	Pennsylvania Railroad.
El Mora Coal Co.	Cambria.....	C. F. Fraser,	Altoona, .....	.....	.....	Pennsylvania Railroad.
Greenwich C. & C. Co.	Cambria.....	C. F. Fraser,	Altoona, .....	.....	.....	Pennsylvania Railroad.
Greenwich Nos. 1 and 2,	Cambria.....	C. F. Fraser,	Altoona, .....	.....	.....	Pennsylvania Railroad.
Benedit Nos. 1 and 2,	Huntingdon...	C. F. Fraser,	Altoona, .....	.....	.....	Pennsylvania Railroad.
C. D. Reed.	Huntingdon...	C. F. Fraser,	Altoona, .....	.....	.....	Pennsylvania Railroad.
Kelly & Flanagan.	Cambria.....	C. F. Fraser,	Altoona, .....	.....	.....	Pennsylvania Railroad.
Kelly No. 1,	Cambria.....	C. F. Fraser,	Altoona, .....	.....	.....	Pennsylvania Railroad.
Puritan Coal Co.	Cambria.....	C. F. Fraser,	Altoona, .....	.....	.....	Pennsylvania Railroad.
Puritan No. 4,	Cambria.....	C. F. Fraser,	Altoona, .....	.....	.....	Pennsylvania Railroad.
Lincoln Coal Mining Co.	Cambria.....	C. F. Fraser,	Altoona, .....	.....	.....	Pennsylvania Railroad.
Linedon,	Cambria.....	C. F. Fraser,	Altoona, .....	.....	.....	Pennsylvania Railroad.

Patton Mfg. Co. Patton Clay Mine,	Cambria,	Geo. E. Pringle,	Patton,	Dani. McMuldrin,	Patton,
S. V. Davis & Co. Flinton,	Cambria,	S. V. Davis,	Bacaria, .....	.....	Pennsylvania Railroad.
W. A. Gould & Bro. Black Diamond,	Cambria,	W. A. Gould,	Oceda Mills, .....	.....	Pennsylvania Railroad.
Coalport Coal Co. Superior No. 2,	Cambria,	A. A. Stevens,	Tyrone,	Geo. P. Bell,	Pennsylvania Railroad.
Ivory Hill,	Cambria,	C. H. Barker,	Elensburg,	John Madill,	Pennsylvania Railroad.
Bradley & Reed. Bradley No. 1,	Blair,	F. N. Bradley,	Gallitzin, .....	.....	Pennsylvania Railroad.
Bradley No. 2,	Blair,	F. N. Bradley,	Gallitzin, .....	.....	Pennsylvania Railroad.
Bradley No. 3,	Blair, .....	.....	.....	.....	Pennsylvania Railroad.
Nant-Y-Glo Coal Mining Co. Nant-Y-Glo No. 1,	Cambria, .....	.....	.....	James Starford, ..	Pennsylvania Railroad.
Nant-Y-Glo No. 2,	Cambria, .....	.....	.....	James Starford, ..	Pennsylvania Railroad.
Morrisdale C. & C. Co. Cunard shaft,	Bedford,	James Denlthorne, ..	.....	Chas. B. Maxwell, ..	Six Mile Run,
Cunard slope,	Bedford, .....	.....	.....	Chas. B. Maxwell, ..	Six Mile Run,
Bedaware No. 1,	Bedford,	James Denlthorne, ..	Huntingdon, .....	.....	H. & B. T. R. R.
Bedaware No. 2,	Bedford,	James Denlthorne, ..	Huntingdon, .....	.....	H. & B. T. R. R.
Fisher, .....	.....	.....	.....	.....	H. & B. T. R. R.
E. Eichelberger & Co. Buck, .....	.....	.....	.....	.....	H. & B. T. R. R.
James & Tappan. Hobbs No. 1,	Huntingdon,	E. G. Jones,	Coalmont, .....	.....	H. & B. T. R. R.
Hobbs No. 2,	Huntingdon,	E. G. Jones,	Coalmont, .....	.....	H. & B. T. R. R.
Walnut Run Coal Mining Co. Walnut Run No. 1,	Cambria,	C. F. Frasier,	Altoona,	Isaac Smith, .....	.....
Walnut Run No. 2,	Cambria,	C. F. Frasier,	Altoona,	Wm. Wood, .....	.....
Duncan & Spangler Coal Co. Tella,	Cambria,	R. B. Spangler,	Hartings,	R. B. Spangler,	Pennsylvania Railroad.
Bluehooker No. 1,	Cambria,	R. B. Spangler,	Hartings,	R. B. Spangler,	Pennsylvania Railroad.
Cambria Coal Co. Cambria No. 1,	Cambria,	D. E. Williams,	Philadelphia,	C. J. Paul,	Pennsylvania Railroad.
Cambria No. 2,	Cambria,	D. E. Williams,	Philadelphia,	C. J. Paul,	Pennsylvania Railroad.

TABLE II.—Gives the total number of tons of coal mined and tons of coke produced in each colliery, number of days worked, number of employees, number of employees killed and injured, number of kegs of powder, etc., used in the Tenth Bituminous District for the year ending December 31, 1902.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Total production of coke in tons.	Number of coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Beech Creek Coal & Coke Co.	Cambria.	115,643	1,080	394	120,117	.....	.....	262	135	.....	.....	87	50	18
Pardoe No. 3.	Cambria.	43,638	.....	45	43,703	.....	.....	191	185	.....	.....	159	50	3
Pardoe No. 4.	Cambria.	77,781	1,530	180	79,491	.....	.....	253	125	.....	.....	69	100	8
Pardoe No. 5.	Cambria.	77,783	.....	105	77,898	.....	.....	247	80	.....	.....	132	.....	11
Pardoe No. 6.	Cambria.	68,068	1,240	90	69,338	.....	.....	241	140	.....	.....	180	50	12
Pardoe No. 7.	Cambria.	286,062	2,350	310	288,752	.....	.....	250	277	1	3	170	100	30
Pardoe No. 8.	Cambria.	118,307	430	190	118,927	.....	.....	248	170	.....	.....	190	50	19
Pardoe No. 12.	Cambria.	85,114	650	191	85,955	.....	.....	232	155	1	.....	205	50	20
Moshannon No. 12.	Cambria.	16,210	.....	54	46,264	.....	.....	227	80	.....	.....	38	25	5
Ashcraft No. 14.	Cambria.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals.	.....	921,606	7,280	1,559	930,445	.....	.....	239	1,247	2	5	1,230	475	126
Webster Coal & Coke Co.	Cambria.	62,035	3,508	595	100,054	3,550	50	920,2	169	.....	.....	523	365	18
Webster No. 7.	Cambria.	167,357	5,317	6,296	193,567	117,353	347	291,8	193	.....	.....	2,742	540	17
Webster No. 10.	Cambria.	37,166	.....	516	100,567	47,337	317	298,3	183	.....	.....	2,327	2,055	32
Webster No. 11.	Blair.	39,218	3,315	539	161,066	87,267	152	283,1	317	2	.....	1,382	505	18
Webster Nos. 12 and 13.	Cambria.	57,032	1,317	152	58,500	.....	.....	210,1	110	.....	.....	214	6,100	13
Webster No. 14.	Cambria.	29,145	3,189	907	33,241	.....	.....	214,2	183	.....	.....	.....	.....	.....
Webster No. 9.	Cambria.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals.	.....	421,892	16,936	9,503	766,425	255,866	649	226,3	1,339	2	5	6,001	9,613	145
Barnes & Tucker.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Laneshaw No. 6.	Cambria.	49,519	.....	.....	49,519	.....	.....	221	58	.....	.....	350	.....	6
Laneshaw No. 8.	Cambria.	167,816	500	.....	168,316	.....	.....	244	144	.....	.....	600	2	6

*Totals in this column are averages.

Lancashire No. 7.	110,842	1,000	1,000	112,842	.....	.....	245	154	.....	1	600	1	9
Lancashire No. 8.	53,337	500	.....	54,337	.....	.....	.....	94	.....	.....	400	5	5
Lancashire No. 9.	12,093	.....	.....	12,093	.....	.....	147	30	.....	.....	50	.....	.....
Lancashire No. 11.	25,228	.....	.....	25,228	.....	.....	132	61	1	.....	150	.....	.....
Juniata Mine.	22,769	.....	.....	22,769	.....	.....	211	30	.....	.....	100	.....	.....
Totals.	382,345	2,000	2,000	385,345	.....	.....	205.1	368	1	1	2,250	6	26
Altoona Coal & Coke Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Delaney	273,044	1,787	1,118	275,949	.....	.....	67	301	429	1	2,500	300	36
Horse Shoe.	36,888	1,118	.....	37,956	.....	.....	290	71	.....	.....	1,400	7	7
Totals.	309,932	2,905	1,118	313,905	.....	.....	67	365.5	501	1	2,500	1,700	43
Rockhill Iron & Coal Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Robertsdale slope.	154,785	2,036	4,314	161,135	.....	.....	281	223	1	.....	2,476	1,960	36
Woodvale shaft.	61,069	5,104	.....	66,113	.....	.....	226	131	.....	.....	1,253	3,100	19
Totals.	215,794	7,140	4,314	227,248	.....	.....	258.5	354	1	.....	3,729	5,360	55
Empire Coal Mining Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Empire.	174,769	2,311	500	175,140	.....	.....	220	225	.....	.....	950	200	17
Edipose.	28,781	40	62	28,883	.....	.....	236	43	.....	.....	300	150	5
Totals.	203,550	2,351	622	204,023	.....	.....	228	268	.....	.....	1,300	350	22
Sterling Coal Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sterling No. 2.	70,000	.....	.....	70,000	.....	.....	272	150	.....	.....	500	.....	5
Sterling No. 4.	32,000	.....	.....	32,000	.....	.....	297	112	.....	.....	200	.....	4
Sterling No. 5.	20,000	.....	.....	20,000	.....	.....	297	60	.....	.....	150	.....	3
Sterling No. 1.	70,000	3,000	200	73,200	.....	.....	274	125	.....	1	500	.....	6
Totals.	192,000	3,000	200	195,200	.....	.....	240	436	.....	1	1,400	.....	18
Maderia Hill Coal Mining Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mummen.	72,064	1,194	104	73,362	.....	.....	240	77	.....	.....	280	150	11
Shanahan No. 1.	11,585	124	724	12,433	.....	.....	267	85	.....	1	277	100	10
Shanahan No. 2.	41,358	81	80	41,459	.....	.....	212	50	.....	.....	156	200	4
Totals.	125,007	1,402	908	126,366	.....	.....	298.3	210	.....	2	828	450	25
Crosson & Clearfield C. & C. Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Leath No. 1.	92,100	2,774	25	94,899	.....	.....	248	115	1	2	750	112	8
Leath No. 2.	5,310	.....	.....	5,310	.....	.....	88	29	.....	.....	54	.....	7
Leath No. 3.	84,106	308	1,107	85,519	.....	.....	249	35	.....	.....	475	100	7
Totals.	181,796	2,882	1,100	187,608	88	103	200	1	2	1,318	212	15
Clearmont Coal Mining Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Clearmont No. 1.	60,176	550	180	60,906	.....	.....	284	74	1	2	150	.....	10
Clearmont No. 2.	60,000	.....	100	60,100	.....	.....	205	107	.....	1	400	.....	11

*Totals in this column are averages.

TABLE II—Continued.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Total production of coke in tons.	Number of coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Crescent No. 3,	Bedford,	23,396	.....	.....	23,396	.....	.....	218	45	.....	.....	100	.....	4
Crescent No. 5,	Bedford,	13,419	.....	32	13,451	.....	.....	100	35	.....	.....	50	500	2
Crescent No. 7,	Bedford,	3,718	.....	.....	3,718	.....	.....	83	29	.....	.....	50	.....	2
Totals, .....	.....	176,342	550	354	177,246	.....	.....	196	290	1	3	350	500	28
John Langdon.														
Cambria No. 1,	Bedford,	57,174	.....	473	57,647	.....	.....	296	71	.....	1	150	.....	8
Chevington, No. 1,	Bedford,	11,235	.....	33	11,268	.....	.....	276	9	.....	.....	50	.....	1
Chevington No. 2,	Bedford,	56,535	159	.....	56,694	.....	.....	296	73	.....	.....	136	.....	8
Totals, .....	.....	124,944	159	506	125,609	.....	.....	272.6	153	.....	1	350	.....	17
Pennsylvania Coal & Coke Co.														
Pennsylvania No. 1,	Blair,	72,407	4,698	1,376	100,041	14,146	50	295.5	191	.....	.....	572	.....	14
Pennsylvania No. 2,	Cambria,	113,360	2,243	34	115,637	.....	120	120.1	294	2	.....	553	150	21
Pennsylvania Nos. 5 and 6,	Cambria,	9,305	569	.....	9,865	.....	120	103	106	.....	.....	50	2,000	.....
Totals, .....	.....	195,072	7,411	1,410	225,543	14,146	170	169.2	591	2	3	1,175	2,150	35
W. H. Sweet.														
Ocean No. 1,	Huntingdon,	9,828	.....	295	10,053	.....	.....	295	16	.....	.....	120	900	2
Ocean No. 2,	Huntingdon,	20,783	.....	75	20,858	.....	.....	265	28	.....	1	290	1,620	5
Ocean No. 3,	Huntingdon,	26,530	.....	.....	26,530	.....	.....	265	31	.....	.....	225	2,440	4
Carlton,	Huntingdon,	27,888	.....	50	28,338	.....	.....	265	39	.....	.....	200	3,280	6
Totals, .....	.....	81,029	.....	320	81,379	.....	.....	265	134	.....	1	745	8,740	17

*Totals in this column are averages.

TABLE II—Continued.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employes—tons.	Total production of coal in tons.	Total production of coke in tons.	Number of coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Taylor & McCoy.														
Gallitzin shaft.	Cambria.	46,079	3,660	3,623	184,835	80,144	238	282	315	.....	.....	940	.....	26
Vinton Colliery Co.	Cambria.	93,875	1,170	50	95,095	.....	.....	234	144	.....	.....	735	700	8
Oak Ridge Coal & Coke Co.	Cambria.	54,720	2,028	300	89,160	26,387	50	216	123	1	1	680	110	7
Black Lick Coal Mining Co.	Cambria.	83,320	1,294	363	84,977	.....	.....	202	147	.....	1	550	50	6
Big Bend.														
E. R. Jackman & Co.	Cambria.	83,676	96	24	83,796	.....	.....	250	121	.....	3	700	240	11
Manchester.														
Glen White Lumber & Coal Co.	Blair.	15,265	2,400	331	63,075	29,301	66	279	126	.....	2	425	.....	12
Glen White.														
Shreve Run Coal Co.	Bedford.	62,398	32	297	62,697	.....	.....	294	87	1	.....	663	1,200	7
Warner.														
Allport Coal Co.	Cambria.	166,500	700	.....	117,000	.....	.....	233	90	.....	2	1,000	500	15
Allport No. 1.														
American Union Coal Co.	Bedford.	50,132	1,627	1,184	52,943	.....	.....	259	106	1	1	290	350	11
Cambria No. 3.														

*Totals in this column are averages.

A. J. Black.		Huntingdon.....	28,210	1,290	29,410	259	54	120	1,500
Black's Mine,	J. P. Gates & Bro.	Bedford,	29,600	75	40,175	264	59	1,260	1,000
Fulton,	J. J. McConnel.	Cambria,	28,150	60	28,510	234	32	144	4
Fulton No. 3,	Shangler Coal & Coke Co.	Cambria,	31,709	58	32,723	275	48	120	5
Gusbie,	Rich Hill Coal Co.	Cambria,	29,082	421	23,563	114	44	88	210
Rich Hill,	El Mena Coal Co.	Cambria,	35,000	100	55,100	297	88	350	8
El Mena Nos. 1 and 2,	Bradley & Reed.	Bluff,	50,000	60	50,600	180	125	120	16
Bradley Nos. 1, 2 and 3,	Greenwich Coal & Coke Co.	Cambria,	26,749	196	27,496	152	60	1	200
Greenwich Nos. 1 and 2,	Benjamin S. S. 1 and 2.	Huntingdon,	19,019	137	16,156	252	67	212	750
Benjamin S. S. 1 and 2,	Kelly & Pharragan.	Cambria,	12,122	51	13,173	224	27	100	3
Kelly No. 1,	Puritan Coal Mining Co.	Cambria,	16,006	232	19,400	221	25	8	23
Puritan No. 4,	Lincoln Coal Mining Co.	Cambria,	22,771		12,771	150	26	8	7
Lincoln,	Puritan Clay Mfg. Co.	Cambria,		19,275	19,275	212	41	20	1,000
Puritan Clay Mfg. Co.	Finch, S. V. Lays & Co.	Cambria,	50,437		19,477	196	18	110	75
Finch,	W. A. Gould & Bro.	Cambria,	11,000	2	12,283	121	34	65	3
Black Diamond,	Coal Hill Coal Co.	Cambria,	7,100	300	7,400	120	23	2	300
Superior No. 2,	Leas Hill Coal Co.	Cambria,	6,300	50	6,350	76	47	200	100
Leas Hill,		Cambria,							

[illegible]

TABLE II—Continued.

Names of Operators and Colleries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employes—tons.	Total production of coal in tons.	Total production of coke in tons.	Number of coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Win. Parsall.	Cambria.	1,060	.....	100	1,100	.....	.....	29	27	.....	.....	.....	.....	2
Beaver Dam, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Duval, Warner Coal Co.	Bedford.	2,247	885	50	3,182	.....	.....	175	33	.....	.....	131	.....	1
Lackawanna Coal & Coke Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lackawanna Nos. 1 and 2,	Cambria.	94,378	.....	1,024	95,402	.....	.....	214.3	127	.....	.....	750	.....	2
Lackawanna No. 3,	Indiana.	3,112	.....	250	6,478	.....	.....	.....	43	1	.....	360	.....	4
Lackawanna No. 4,	Indiana.	3,739	4,739	437	9,915	.....	.....	.....	69	3	.....	500	.....	4
Totals, .....	.....	102,329	7,831	1,711	111,795	.....	.....	214.3	249	4	.....	1,550	.....	10
Rembrandt Peale.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bloom Victor No. 2,	Cambria.	114,609	100	.....	114,709	.....	.....	245.2	137	.....	.....	1,012	50	12
Bloom Victor No. 3,	Cambria.	43,118	480	.....	43,598	.....	.....	242	56	.....	.....	486	125	4
Bloom Victor No. 4,	Cambria.	39,151	85	.....	39,236	.....	.....	211	59	.....	.....	384	50	6
Bloom Victor No. 12,	Cambria.	17,289	30	.....	17,310	.....	.....	274	77	.....	.....	628	50	6
Totals, .....	.....	274,158	695	.....	274,853	.....	.....	243	329	.....	1	2,310	275	28
Nant Y Gho Coal Mining Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nant Y Gho Nos. 1 and 2,	Cambria.	70,385	260	.....	70,785	.....	.....	181	106	.....	.....	509	.....	10
Jos. E. Thropp.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kearney Nos. 1 and 2,	Bedford.	316	1,091	763	64,970	39,537	170	294	180	.....	1	848	200	20

*Totals in this column are averages.

Saxon Furnace Co.	Huntingdon, ..	4,351	90	298	50,329	32,710	123	279	124	1	200	2,900	12
Melrose,													
Davis, Spencer & Co.	Cambria,	23,124		1,560	24,654			265	62		325		4
Van Ormer,													
Forlinger Bros.	Cambria,	21,780		160	21,880			213	30	1	300	500	3
Susquehanna,													
Daugherty Coal Co.	Cambria,	5,426		225	5,651			190	12		40	11	2
Daugherty,													
Grand totals,		5,829,229	101,956	42,615	6,751,865	534,396	1,767	222	10,793	43	48,857	46,685	987

*Totals in this column are averages.

TABLE II—Continued.

Name of Operators.	County.	Number of Boilers.			Locomotives.			Total horse power.	Number steam engines of all classes.	Total horse power.	Number pumps delivering water to surface.	Capacity in Gallons per minute.	Quantity delivered to surface per minute—gallons.	Number electric dynamos.	Number air compressors.
		Number of Boilers.			Locomotives.										
		Cylindrical.	Horse power.	Tubular.	Horse power.	Steam.	Electric.								
Beech Creek Coal and Coke Co.,	Cambria,	1	50	15	1,080	1	1,130	16	635	28	1,248	1,248	4	1	4
Webster Coal and Coke Co.,	Cambria,	7	325	8	855	1	1,325	10	1,355	2	1,288	1,288	1	1	1
Varney & Barker,	Cambria,	4	652	9	1,307	2	1,307	6	302	2	1,636	625	3	1	1
Rockhill Iron and Coal Co.,	Huntingdon,	1	166	2	260	2	940	5	342	1	1,636	2,800	1	1	1
Empire Coal Mining Co.,	Cambria,	4	250	3	250	2	940	2	330	1	2,800	2,100	1	1	1
Stirling Coal Co.,	Cambria,	80	155	4	155	501	139	1	139	2	200	600	1	1	1
Modena Hill Coal Mining Co.,	Cambria,	80	160	2	160	1	380	1	380	2	300	300	1	1	1
Cressent and Clearfield Coal and Coke Co.,	Bedford,	140	140	2	140	1	380	1	380	2	400	980	3	1	1
John Langdon	Bedford,	1	80	1	80	1	80	1	80	1	400	500	1	1	1
West Virginia Coal and Coke Co.,	Blair & Cam.	2	50	9	1,450	3	1,500	5	1,000	1	400	250	3	1	2
W. H. Sweet,	Huntingdon,	1	40	1	80	1	120	4	225	1	330	165	1	1	1
Morrisdale Coal Co.,	Bedford,	4	360	4	360	3	360	3	280	3	1,100	850	1	1	1
Colonial Iron Co.,	Bedford,	1	85	1	85	1	85	1	200	1	200	200	1	1	1
Huntingdon Coal Co.,	Huntingdon,	1	85	1	85	1	85	1	200	1	200	200	1	1	1
James & Tappan,	Huntingdon,	1	85	1	85	1	85	1	200	1	200	200	1	1	1
W. Eichberger & Co.,	Cambria,	1	150	1	150	3	155	3	155	1	155	155	1	1	1
Walnut Run Coal Mining Co.,	Cambria,	2	250	2	250	1	250	2	170	1	466	466	1	1	1
Clearfield Bit Coal Corporation,	Cambria,	250	250	2	250	1	250	2	390	1	466	466	1	1	1
Taylor & McVey,	Cambria,	184	500	3	500	1	500	3	350	1	150	75	1	1	1
Vinton Colliery Co.,	Cambria,	50	130	1	130	1	130	1	350	1	150	75	1	1	1
Oak Ridge Coal & Coke Co.,	Cambria,	50	130	1	130	1	130	1	350	1	150	75	1	1	1
Black Lick Coal Mining Co.,	Cambria,	35	35	1	35	1	35	1	220	1	150	75	1	1	1
E. R. Jackman & Co.,	Blair,	40	40	1	40	1	40	1	140	2	800	450	1	1	1
Glen White Lumber and Coal Co.,	Bedford,	100	100	2	100	1	100	2	140	2	800	450	1	1	1
Shoemaker Run Coal Co.,	Cambria,	225	225	4	225	1	225	3	139	1	300	100	1	1	1
Allport Coal Co.,	Bedford,	225	225	4	225	1	225	3	139	1	300	100	1	1	1
American Union Coal Co.,	Bedford,	225	225	4	225	1	225	3	139	1	300	100	1	1	1

Huntingdon.									
A. J. Black,	1	40							
J. P. McGinnis & Bro.,									
Bedford,									
Bedford,									
Cambria,									
Cambria,									
Rich Hill Coal Co.,	1	100							
El Mena Coal Co.,									
Cambria,									
Blair,									
Bradley & Reed,									
Greenwich Coal and Coke Co.,									
C. D. Reed,									
Huntingdon,									
Kelly & Flanagan,									
Puritan Coal Mining Co.,									
Libbott Coal Mining Co.,	1	50							
Parton Clay Mfg. Co.,									
Cambria,									
W. A. Davis & Co.,									
Cambria,									
W. A. Davis & Co.,									
Coalbrookdale,									
Ivory Hill Coal Co.,									
Cambria,									
Wm. Farnell,									
Warner Coal Co.,									
Lackawanna Coal and Coke Co.,									
Bedford,									
Cambria,									
Rembrandt Peale,									
North Y. Ohio Coal Mining Co.,									
Cambria,									
Joe E. Throop,									
Saxon Furnace Co.,									
Huntingdon,									
Davis, Spomer & Co.,									
Bedford,									
Daugherty Coal Co.,									
Cambria,									
Cambria,									
Grand totals	45	1,576	122	9,185	16,686	4	30	196	7,772
								82	19,466
									14,117
									23
									31

TABLE III.—Showing the number of each class of employees at each colliery in the Tenth Bituminous District during the year 1902.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.								Grand total, inside and outside.	
		Total inside.										Total outside.									
		Mine foremen.	Assistant mine foremen.	Pit bosses.	Miners.	Machine runners.	Machine loaders.	Machine scrapers.	Drivers and runners.	Door boys and helpers.	Company men.	All other employees.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	Coke employees.	Book-keepers and clerks.	All other employees.		
Beech Creek Coal and Coke Co.	Cambria.	1	1	1	5	6	93	6	8	6	6	125	1	1	3	1	1	1	1	10	135
Pardee No. 1.	Cambria.	1	1	1	5	4	56	4	6	4	4	117	1	1	1	1	1	1	1	8	125
Pardee No. 2.	Cambria.	1	1	1	5	5	53	5	6	6	6	117	1	1	1	1	1	1	1	8	125
Pardee No. 3.	Cambria.	1	1	1	4	5	51	5	3	3	3	108	1	1	1	1	1	1	1	4	110
Pardee No. 4.	Cambria.	1	1	1	5	5	51	5	3	3	3	108	1	1	1	1	1	1	1	12	120
Pardee No. 5.	Cambria.	1	1	1	5	5	51	5	3	3	3	108	1	1	1	1	1	1	1	12	120
Pardee No. 6.	Cambria.	1	1	1	5	5	51	5	3	3	3	108	1	1	1	1	1	1	1	12	120
Pardee No. 7.	Cambria.	1	1	1	5	5	51	5	3	3	3	108	1	1	1	1	1	1	1	12	120
Pardee No. 8.	Cambria.	1	1	1	5	5	51	5	3	3	3	108	1	1	1	1	1	1	1	12	120
Pardee No. 9.	Cambria.	1	1	1	5	5	51	5	3	3	3	108	1	1	1	1	1	1	1	12	120
Pardee No. 10.	Cambria.	1	1	1	5	5	51	5	3	3	3	108	1	1	1	1	1	1	1	12	120
Pardee No. 11.	Cambria.	1	1	1	5	5	51	5	3	3	3	108	1	1	1	1	1	1	1	12	120
Pardee No. 12.	Cambria.	1	1	1	5	5	51	5	3	3	3	108	1	1	1	1	1	1	1	12	120
Pardee No. 13.	Cambria.	1	1	1	5	5	51	5	3	3	3	108	1	1	1	1	1	1	1	12	120
Pardee No. 14.	Cambria.	1	1	1	5	5	51	5	3	3	3	108	1	1	1	1	1	1	1	12	120
Pardee No. 15.	Cambria.	1	1	1	5	5	51	5	3	3	3	108	1	1	1	1	1	1	1	12	120
Totals,		10	10	10	127	64	273	64	64	57	57	1,150	13	13	50	50	50	50	50	88	1,237
Webster Coal and Coke Co.	Cambria.	1	1	1	10	9	62	9	12	3	3	122	1	1	4	4	28	1	1	11	169
Webster No. 7.	Cambria.	1	1	1	10	15	218	15	21	13	13	325	1	1	6	6	127	1	1	25	483
Webster No. 10.	Cambria.	1	1	1	10	7	65	7	8	8	8	104	1	1	1	1	57	1	1	9	197
Webster No. 11.	Cambria.	1	1	1	98	7	43	7	15	9	9	221	1	1	7	7	60	1	1	21	337
Webster No. 12 and 13.	Cambria.	2	2	2	27	4	28	4	11	7	7	49	1	1	3	3	2	1	1	5	110
Webster No. 14.	Cambria.	1	1	1	15	3	14	3	8	3	3	65	1	1	5	5	1	1	12	87	
Webster No. 9.	Cambria.	1	1	1	150	45	480	45	75	35	35	937	4	4	20	20	265	6	6	83	1,379
Totals,		7	7	7	150	45	480	45	75	35	35	937	4	4	20	20	265	6	6	83	1,379
Cresson & Clearfield C. & C. Co.	Cambria.	1	1	1	94	5	20	5	10	3	3	140	1	1	2	2	1	1	1	5	249
Dean No. 8.	Cambria.	1	1	1	21	1	1	1	1	1	1	24	1	1	1	1	1	1	1	5	29

Dean No. 10.	1	2	73	5	1	2	82	1	2	1	2	3	185
Totals.	2	188	5	17	4	5	246	1	5	2	4	13	259
Barnes & Tucker.													
Lancashire No. 6.	1	49	8	3	2	1	56	1	1	1	2	2	58
Lancashire No. 7.	1	108	8	7	2	1	136	2	2	2	3	8	144
Lancashire No. 8.	1	120	6	6	2	6	144	1	1	1	2	10	144
Lancashire No. 9.	1	62	8	3	1	3	86	1	1	1	2	5	39
Lancashire No. 10.	1	28	2	1	2	1	39	1	1	1	2	3	39
Lancashire No. 11.	1	48	2	2	2	1	58	1	1	1	2	3	61
Junata mine.	1	28	2	1	2	1	39	1	1	1	2	3	39
Totals.	5	413	34	20	9	13	580	2	5	6	13	28	768
Altoona Coal and Coke Co.													
Potomac mine.	1	290	5	30	1	8	2	391	1	6	6	33	430
Horse Shoe mine.	1	20	10	10	5	1	68	1	1	1	2	3	71
Totals.	2	310	5	40	6	9	429	1	7	6	22	36	501
Backhill Iron and Coal Co.													
Redecliffe slope.	1	165	10	18	5	2	201	1	1	2	3	14	223
Woodside shaft.	1	9	1	10	1	6	115	1	1	1	3	16	131
Totals.	2	267	1	28	6	15	316	2	2	3	8	30	354
Empire Coal Co.													
Empire.	1	10	13	6	2	28	294	1	1	2	3	13	235
Felton.	1	36	1	1	1	3	40	1	1	1	2	3	46
Totals.	2	46	1	7	3	31	334	1	2	3	5	16	281
Starling Coal Co.													
Starling No. 1.	1	45	12	9	3	3	144	1	1	1	2	6	159
Starling No. 2.	1	50	6	6	4	3	106	1	1	1	2	6	122
Starling No. 3.	1	30	3	4	4	2	62	1	1	1	2	6	69
Starling No. 4.	1	55	6	6	6	3	118	1	1	1	2	7	135
Totals.	4	180	30	29	19	9	431	4	4	4	12	25	497
Madison Hill Coal Mining Co.													
Madison.	1	10	5	5	3	1	70	1	1	1	2	7	77
Shawnee.	1	7	1	1	1	1	77	1	1	1	2	4	83
Shawnee No. 1.	1	40	1	2	2	1	46	1	1	1	2	4	50
Totals.	3	149	1	11	6	3	193	3	3	3	6	17	210
Cherry Hill Coal Mining Co.													
Cherry Hill.	1	24	1	1	1	1	87	1	1	1	2	7	94
Cherry Hill No. 1.	1	7	1	1	1	1	10	1	1	1	2	4	17
Cherry Hill No. 2.	1	1	1	1	1	1	4	1	1	1	2	4	10

TABLE III—Continued.

Names of Operators and Col- lieries.	County.	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.										Grand total, inside and outside.
		Mine foremen.	Assistant mine foremen.	Fire bosses.	Miners.	Machine runners.	Machine loaders.	Machine scrapers.	Drivers and runners.	Door boys and helpers.	Company men.	All other employees.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	Coke employees.	Book-keepers and clerks.	All other employees.	Total outside.	
Crescent No. 5,	Bedford,	1	1	1	24	1	1	1	1	1	1	2	31	1	1	1	1	1	1	3	4	35
Crescent No. 7,	Bedford,	1	1	1	16	1	1	1	1	1	1	1	25	1	1	1	1	1	1	3	4	29
Totals, .....	.....	5	2	2	208	2	2	2	20	9	12	7	261	2	2	6	3	2	2	16	29	290
John Langdon.																						
Cambria No. 1,	Bedford,	1	1	1	51	1	1	1	6	3	2	1	64	1	1	1	1	1	1	3	7	71
Chevington No. 1,	Bedford,	1	1	1	8	1	1	1	1	1	1	1	9	1	1	1	1	1	1	1	9	73
Chevington No. 2,	Bedford,	1	1	1	50	1	1	1	6	4	2	2	65	1	2	1	1	1	1	5	8	73
Totals, .....	.....	2	2	2	109	2	2	2	13	7	4	3	138	1	3	2	2	2	1	8	15	153
Pennsylvania Coal and Coke Co.																						
Pennsylvania No. 1,	Blair,	1	1	1	53	3	75	3	10	1	6	1	153	1	1	3	4	38	1	10	38	191
Pennsylvania No. 2,	Cambria,	1	1	1	9	9	130	9	12	8	22	1	192	1	1	4	6	1	1	1	12	204
Pennsylvania Nos. 5 and 6,	Cambria,	2	2	2	6	6	75	6	12	1	2	1	93	1	1	6	4	4	2	1	13	106
Totals, .....	.....	4	4	4	53	18	280	18	22	9	30	3	438	3	1	13	14	18	4	10	63	501
Colonial Iron Co.																						
Durham No. 1,	Bedford,	1	1	1	40	1	1	1	6	2	3	1	54	1	1	2	4	46	1	5	58	112
Durham No. 2,	Bedford,	1	1	1	60	1	1	1	8	3	4	1	76	1	1	2	2	1	1	6	10	86
Judith,	Bedford,	1	1	1	30	1	1	1	4	1	2	2	40	1	1	1	2	1	1	6	8	48
Totals, .....	.....	3	3	3	130	3	3	3	18	6	9	3	170	1	3	4	8	46	1	16	76	246

W. H. Sweet.																	
Ocean No. 1,	Huntingdon,	1	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	16
Ocean No. 2,	Huntingdon,	1	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	28
Ocean No. 3,	Huntingdon,	1	43	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	51
Ocean No. 4,	Huntingdon,	1	32	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	39
Carbon,	Huntingdon,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals,	.....	4	107	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	134
Morrisdale Coal and Coke Co.																	
Conard shaft,	Bedford,	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	11	73
Conard slope,	Bedford,	1	30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	38
Totals,	.....	2	80	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12	111
Huntingdon Coal Co.																	
Delaware No. 1,	Bedford,	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	86
Delaware No. 2,	Bedford,	1	35	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6	48
Totals,	.....	2	95	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	11	134
Cambria Coal Mining Co.																	
Cambria No. 1,	Cambria,	1	60	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12	113
Cambria No. 2,	Cambria,	1	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	28	28
Totals,	.....	2	85	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	40	141
Lumsan & Shaugler.																	
Delta,	Cambria,	1	60	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7	107
Blue-laker,	Cambria,	1	45	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	57
Totals,	.....	2	105	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	164
Lackawanna Coal and Coke Co.																	
Lackawanna No. 1,	Cambria,	1	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	18	109
Lackawanna No. 2,	Cambria,	1	22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	28
Lackawanna No. 3,	Bedford,	1	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6	43
Lackawanna No. 4,	Bedford,	1	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12	19
Totals,	.....	4	68	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	36	219
Rembrandt Peale.																	
Bloom Victor No. 2,	Cambria,	1	109	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	14	137
Bloom Victor No. 3,	Cambria,	1	42	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	56
Bloom Victor No. 4,	Cambria,	1	48	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	59
Bloom Victor No. 12,	Cambria,	1	64	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	77
Totals,	.....	4	264	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	24	329
Jones & Tappan.																	
Hicks No. 1,	Huntingdon,	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	14
Hicks No. 2,	Huntingdon,	1	28	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	40
Totals,	.....	2	29	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6	54

TABLE III—Continued.

Names of Operators and Col- lieries.	County.	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.										Grand total, inside and outside.
		Mine foremen.	Assistant mine foremen.	Fire bosses.	Miners.	Machine runners.	Machine loaders.	Machine scrapers.	Drivers and runners.	Door boys and helpers.	Company men.	All other employes.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	Coke employes.	Book-keepers and clerks.	All other employes.	Total outside.	
Clearfield Coal Corporation.																						
West Branch,	Cambria,.....	1	1	2	39	14	160	14	13	2	.....	12	250	.....	1	2	6	.....	1	20	30	280
Taylor & McCoy.																						
Gallitzin shaft,	Cambria,.....	1	1	.....	8	8	164	8	22	8	.....	11	223	.....	1	4	8	78	1	.....	92	315
Vinton Colliery Co.																						
Vinton colliery,	Cambria,.....	1	.....	66	6	.....	.....	6	7	.....	21	10	117	1	.....	3	3	.....	1	19	27	144
Oak Ridge Coal and Coke Co.																						
Oak Ridge,	Cambria,.....	1	.....	.....	.....	4	55	4	7	2	6	.....	79	1	.....	1	3	16	1	22	44	123
Black Lick Mining Co.																						
Big Bend,	Cambria,.....	1	1	.....	79	2	19	2	9	3	8	2	126	1	1	4	4	.....	2	9	21	117
E. R. Jackman & Co.																						
Manchester,	Cambria,.....	1	.....	105	.....	.....	.....	.....	4	2	2	.....	114	.....	.....	1	1	.....	.....	6	7	121
Glen White Coal & Land Co.																						
Glen White,	Blair,	1	.....	73	.....	.....	.....	.....	8	3	3	.....	88	1	1	2	5	24	1	4	28	126
Shreve Run Coal Co.																						
Warner,	Bedford,.....	1	1	.....	65	.....	.....	.....	8	1	2	1	79	1	.....	2	.....	.....	1	4	8	87
Allport Coal Co.																						
Allport No. 1,	Cambria,.....	1	1	.....	60	5	.....	5	5	2	2	2	83	1	1	1	2	.....	1	1	7	90

American Union Coal Co. Cambria No. 3,	Bedford,.....	1	1	....	70	.....	.....	10	2	10	.....	94	1	....	2	3	.....	1	5	12	106
Black, A. J. Black,	Huntingdon,	1	1	....	41	.....	.....	5	1	1	.....	50	1	1	1	.....	.....	1	.....	4	54
Fulton, J. P. Gates & Bro.	Bedford,.....	1	....	....	40	.....	.....	7	4	1	.....	53	1	1	1	1	.....	1	2	6	30
Patton No. 3,	Cambria,.....	1	1	....	27	.....	.....	2	.....	.....	.....	31	1	....	.....	.....	.....	.....	1	22	
Strangler Coal and Coke Co. Gusso,	Cambria,.....	1	....	....	...	3	30	3	2	.....	.....	41	1	....	1	2	.....	1	2	7	48
Rich Hill Coal Co. Rich Hill,	Cambria,.....	1	....	....	35	.....	.....	4	1	1	.....	42	.....	.....	1	.....	.....	.....	1	2	44
El Morn Coal Co. El Morn Nos 1 and 2,	Cambria,.....	1	....	....	70	.....	.....	5	2	2	.....	82	1	....	1	.....	3	.....	5	8	88
Greenwich Coal and Coke Co. Greenwich No. 1,	Cambria,.....	1	1	....	40	.....	.....	2	2	.....	.....	47	1	....	2	1	.....	1	1	5	52
Greenwich No. 2,	Indiana,	1	1	....	...	...	...	2	1	1	.....	5	...	...	...	...	...	1	1	3	8
Tulla, .....	.....	2	1	....	46	.....	.....	4	3	1	.....	31	1	....	2	2	.....	2	2	9	60
C. D. Reed, Benedict Nos. 1 and 2,	Huntingdon,	1	...	....	43	.....	.....	5	2	7	.....	62	1	1	2	.....	1	.....	5	67	
Kelly & Flanagan, Kelly No. 1,	Cambria,.....	1	....	....	29	.....	.....	2	.....	.....	.....	33	.....	.....	.....	.....	1	2	4	27	
Puritan Coal Mining Co. Puritan No. 1,	Cambria,.....	1	....	....	27	.....	.....	1	.....	2	.....	31	1	....	1	1	.....	1	.....	4	35
Lincoln Coal Co. Lincoln,	Cambria,.....	1	...	....	18	.....	.....	2	.....	3	.....	24	1	.....	.....	.....	1	.....	2	26	
Patton Clay Mfg. Co. Patton Clay Mine,	Cambria,.....	1	...	....	19	.....	.....	10	12	.....	.....	33	1	....	1	1	.....	1	4	8	41
Just E. Threlap, Kearney Nos 1 and 2,	Bedford,.....	1	...	....	75	.....	.....	16	2	4	.....	106	1	1	2	3	54	1	11	74	180
Sutton Furnace Co. Metz,	Huntingdon,	1	...	....	2	.....	.....	6	.....	.....	.....	68	1	...	2	1	30	.....	2	36	124
Jones, Spencer & Co. Van Orman,	Cambria,	1	...	....	50	.....	.....	2	.....	2	.....	4	38	1	...	...	1	2	4	67	
Longier Bros. Shoopshams,	Cambria,	1	...	....	24	.....	.....	1	...	2	.....	4	39	1	...	...	...	...	1	...	20

TABLE III—Continued.

Names of Operators and Col- lieries,	County.	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.										Grand total, inside and outside.
		Mine foremen.	Assistant mine foremen.	Fire bosses.	Miners.	Machine runners.	Machine loaders.	Machine scrapers.	Drivers and runners.	Door boys and helpers.	Company men.	All other employees.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	Coke employees.	Book-keepers and clerks.	All other employees.	Total outside.	
Coalport Coal Co.																						
Superior No. 2,	Cambria,....	1	.....	.....	12	.....	.....	.....	2	.....	.....	.....	15	1	.....	1	.....	.....	.....	6	8	23
Daugherty Coal Co.																						
Daugherty,	Cambria,....	1	.....	.....	9	.....	.....	.....	1	.....	.....	.....	11	1	.....	.....	.....	.....	.....	.....	1	12
Ivory Hill Coal Co.																						
Ivory Hill,	Cambria,....	1	.....	.....	25	.....	.....	.....	2	1	2	.....	31	2	.....	3	2	.....	1	6	14	45
Warner Coal Co.																						
Duval,	Bedford,....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	25	27	1	.....	1	3	.....	1	.....	6	33
Wm. Parsall.																						
Beaver Dam,	Cambria,....	1	.....	.....	22	.....	.....	.....	1	.....	2	.....	26	1	.....	.....	.....	.....	.....	.....	1	27
Bradley & Reed.																						
Bradley Nos. 1, 2 and 3,	Blair,.....	3	.....	.....	100	.....	.....	.....	10	3	6	.....	122	1	.....	1	.....	.....	1	.....	3	125
W. A. Gould & Bro.																						
Black Diamond,	Cambria,....	1	.....	.....	30	.....	.....	.....	2	.....	.....	.....	33	.....	.....	1	.....	.....	.....	.....	1	34
Walnut Run Coal Mining Co.																						
Walnut Run No. 1,	Cambria,....	1	.....	.....	28	.....	.....	.....	1	2	3	.....	35	1	.....	1	1	.....	.....	.....	3	38
Walnut Run No. 2,	Cambria,....	1	.....	.....	31	.....	.....	.....	3	1	3	.....	39	1	.....	1	.....	.....	.....	2	4	43
Totals,	Totals,	2	.....	.....	59	.....	.....	.....	4	3	6	.....	74	2	.....	2	1	.....	.....	2	7	81

TABLE III—Continued.

Names of Operators and Collieries.	County.	Number of Days Worked in Each Month.												Total.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
Roech Creek Coal and Coke Co.,	Cambria,....	20.2	12.2	16.2	21.25	20.2	20.4	22.6	23.25	22.7	22.8	18.5	21.3	220.1
Webster Coal and Coke Co.,	Cambria,....	24	20.5	20	18.5	22.1	22.1	21.5	21	22.33	20	16.5	18	243
Cresson and Clearfield Coal and Coke Co.,	Cambria,....	20	17	21	20.5	23.5	22.5	20.5	22	22.5	22.66	20.33	19	193
Barnes and Tucker,	Cambria,....	20.1	13.66	14.2	17.1	23.1	21	23	20.33	13.5	18.33	20	16	196.1
Alena Coal and Coke Co.,	Cambria,....	22	22.5	22.5	17.5	17.5	21.5	23.5	23.5	23.5	26.33	22	22	228
Rockhill Iron and Coal Co.,	Cambria,....	20.5	22	22.5	17.5	17.5	19.5	23.5	23.5	23.5	26.33	22	22	228
Knapp Coal Co.,	Cambria,....	20.5	22	22.5	17.5	17.5	21.5	23.5	23.5	23.5	26.33	22	22	228
Stinking Coal Co.,	Cambria,....	20.5	22	22.5	17.5	17.5	21.5	23.5	23.5	23.5	26.33	22	22	228
Modern Hill Coal Mining Co.,	Cambria,....	20.5	22	22.5	17.5	17.5	21.5	23.5	23.5	23.5	26.33	22	22	228
Cresson Coal Mining Co.,	Bedford,....	19.33	21.33	22.33	22.33	22.66	20.66	22.66	23.33	20.33	20	17.66	22.1	236.1
John Langdon,	Bedford,....	20.5	23	24	24.2	24.2	24.2	24.2	24.2	24.2	24.2	24.2	24.2	248
Pennsylvania Coal and Coke Co.,	Blair & Cam.,	25.2	23	26	24	24	22.75	21.5	25.66	24.66	24.66	24	25	242
Colonial Iron Co.,	Bedford,....	26	21	24.5	21.5	25	24.5	21	25.66	24.66	24.66	24	25	242
W. H. Sweet,	Huntingdon,	20	20	22	22	23	22	21	22	22	24	23	23	242
Mortislake Coal and Coke Co.,	Bedford,....	24.3	20.66	24.4	22.3	24	24	24	23	23	26	22.75	23	283.2
Huntingdon Coal Co.,	Bedford,....	22	17	20	17	24	22	19	23	11.5	21	20.5	20	215
Cambria Coal Mining Co.,	Cambria,....	14	10	15	12.5	17.5	22	16.5	16.5	16.5	15.5	21	21	186
Duncan & Stanger,	Cambria,....	20.3	17.3	21.2	19.4	21.3	21.3	21.3	21.2	16	13.6	11.5	9.5	170.5
Lackawanna Coal and Coke Co.,	Cambria,....	20.25	16	19.58	23	20.5	20.5	21.33	22.7	16.5	13.6	11.5	13.6	214.3
Reinhardt Pools,	Cambria,....	20	20	22	22	23	22	21	22	22	24	23	23	243
Charles A. Tappan,	Cambria,....	20	20	22	22	23	22	21	22	22	24	23	23	243
Tharion & McVay,	Cambria,....	20	20	22	22	23	22	21	22	22	24	23	23	243
Vinton Colliery Co.,	Cambria,....	22	21	22	21.5	25	25	23.5	24	24	27	25	25	286
Oak Ridge Coal and Coke Co.,	Cambria,....	22	16	18	18	20	21	18	17	16	17	11	15	211
Black Lake Mining Co.,	Cambria,....	22	16	18	18	20	21	18	17	16	17	11	15	211
E. R. Jackson & Co.,	Cambria,....	13	6	10.1	16.4	17	18.4	19.9	20.6	22.1	13	19.7	11.5	262.2
Glen White Coal and Land Co.,	Blair,....	26	23	24	24	25	22	24	26	23	25	23	16	250
Shoove Run Coal Co.,	Bedford,....	26	23	24	24	25	22	24	26	23	25	23	16	250
Allport Coal Co.,	Cambria,....	20	19	22	22	25	26	19	25	18	18	16	12	233
American Union Coal Co.,	Bedford,....	19	20.5	22	21	17	18	24	24	25	25	21	21	250
A. J. Black,	Huntingdon,	25	18	18	23	20	30	20	22	22	23	23	24	279

J. P. Gates & Bro.,	22	20	23	22	21	23	22	24	22	22	22	20	264
Bedford,.....	18	13	16	23	21	22	23	24	23	23	23	18	234
Cambria,.....	23	17	23	25	24	21	23	25	22	25	25	18	234
Rich Hill Coal Co.,	11.1	10.1	8	9.7	10.1	13.1	13.1	7	7	16	9	5	114.1
El Meru Coal Co.,	22	20	21	24	22	24	20	23	24	21	22	21	257
Greenwich Coal and Coke Co.,	17	12	17	14	21	23	24	21	18	16.5	15.5	21	162.5
C. D. Reed,	14	6	21.3	22	23	13.5	12.5	24	23	22	21	21	256
Kelly & Flanagan,	25.5	17.5	21.3	13	12.8	13.5	13.5	26	26	26	23	24.5	224
Puritan Coal Mining Co.,	13.2	9	9.9	10.6	10.2	10.2	10.2	17.4	15.7	25.5	17.1	19.1	239.6
Lanesin Coal Co.,	27	24	26	26	16.7	16.7	16.7	16.4	16	12	12	8.9	149.7
Patton Clay Mfg. Co.,	27	24	26	26	16.7	16.7	16.7	16.4	16	12	12	8.9	149.7
Joseph E. Thropp,	25	20	21	23	23	23	23	23	23	23	23	23	23
Saxon Furnace Co.,	20	10	20	13	21	23	23	13	13	13	13	13	254
Heave, Spencer & Co.,	24	20	20	21	21	23	23	23	23	23	23	23	23
Deering Coal Co.,	16	3	9	14	11	13	13	15	18	20	11	11	23
Deering Coal Co.,	16	12	14	14	12	12	12	16	22	23	23	23	23
Ivan Hill Coal Co.,	16	12	14	14	12	12	12	16	22	23	23	23	23
Warner Coal Co.,	16	12	14	14	12	12	12	16	22	23	23	23	23
Wm. Parcell,	15	18	18	20	26	26	26	25	24	25	25	24	175
Bondley & Reed,	15	18	18	20	26	26	26	25	24	25	25	24	175
W. A. Gould & Son,	15	18	18	20	26	26	26	25	24	25	25	24	175
Wheat Run Coal Mining Co.,	21	16.5	16.5	17	17	17	17	18	18	18	18	18	23
E. F. Deane & Co.,	21	16.5	16.5	17	17	17	17	18	18	18	18	18	23
East & Hunt,	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5
North York Coal Mining Co.,	26	19	14	15	15	15	15	15	15	15	15	15	15
S. V. Davis,	16	12	12	17	14	14	14	15	11	11	11	11	11
Cambria,.....	16	12	12	17	14	14	14	15	11	11	11	11	11

TABLE IV.—List of fatal accidents that occurred in and about the mines of the Tenth Bituminous District for the year ending December 31, 1902.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Feb. 15	Carl Pereton,	Russian, ..	Miner,	24	M.	1	2	Dean No. 8,	Cambria,	Fatally injured by fall of slate, died May 2.
Feb. 20	Frank Delaux,	Belgian,	Miner,	50	M.	1	3	Robertsdale,	Huntingdon, ..	Instantly killed by fall of rock.
March 15	James Huchins,	English,	Miner,	41	M.	1	3	Oak Ridge,	Cambria,	Instantly killed by cabs.
April 22	John Fialish,	English,	Miner,	36	M.	1	3	Phinagan No. 9,	Cambria,	Instantly killed by a fall of coal.
June 3	Andrew Le Warring, ..	American, ..	Miner,	47	M.	1	1	Crescent No. 1,	Bedford,	Instantly killed by a fall of roof.
June 5	Simon Plusta,	Lithuanian, ..	Miner,	40	M.	1	6	Webster No. 13,	Cambria,	Fatally injured by a fall of coal, died July 24th.
July 2	Ernest Monroe,	Negro,	Miner,	21	M.	5	4	Lackawanna No. 4,	Indiana,	Instantly killed by a fall of rock.
Aug. 2	John Henchman,	Pole,	Machine runner, ..	34	M.	1	3	Mitchells No. 1,	Blair,	Instantly killed by cabs, knocking the timbers out filling the car in which he was riding.
Oct. 9	John McIntyre,	American, ..	Ass't. foreman, ..	35	M.	1	3	Warner,	Bedford,	Instantly killed by a blast.
Oct. 11	John Patterson,	Irish,	Miner,	64	M.	1	5	Mitchells No. 1,	Blair,	Instantly killed by cabs.
Oct. 11	Wm. Patterson,	English,	Miner,	47	M.	1	5	Pelancy,	Cambria,	Instantly killed by a fall of roof.
Oct. 11	Mikael Cavash,	Hungarian, ..	Miner,	50	M.	1	5	Lackawanna No. 4,	Indiana,	Instantly killed by a fall of roof.
Oct. 31	Charles Remish,	Hungarian, ..	Miner,	30	M.	1	1	Lackawanna No. 4,	Indiana,	Instantly killed by a fall of roof.
Nov. 7	Edward Lemih,	English,	Miner,	21	M.	5	4	Fisher,	Huntingdon, ..	Fatally injured while riding between cabs.
Nov. 14	Paul Kasup,	Hungarian, ..	Miner,	21	M.	1	3	Superior No. 2,	Cambria,	Instantly killed by a fall of coal.
Nov. 14	Paul Hertell,	Slav,	Miner,	28	M.	1	3	Lackawanna No. 3,	Indiana,	Fatally injured by explosion of dynamite.
Nov. 15	Geo. Andriasek,	Lithuanian, ..	Miner,	32	M.	1	1	Moshannon No. 13,	Cambria,	Instantly killed by a fall of roof.
Nov. 21	Patrick Kennedy,	American, ..	Miner,	30	M.	1	1	Hickes No. 2,	Huntingdon, ..	Fatally burned by a blown out shot igniting coal dust.
Nov. 21	Mikael Brennen,	American, ..	Miner,	28	M.	1	2	Hickes No. 2,	Huntingdon, ..	Fatally burned by a blown out shot igniting coal dust.
Dec. 24	Mike O'Leary,	Slav,	Miner,	39	M.	1	8	Lancashire No. 11, ..	Cambria,	Instantly killed by a fall of coal.
Dec. 26	Dominick Dervortcher, ..	Italian,	Miner,	22	M.	1	2	Superior No. 2,	Cambria,	Instantly killed by a fall of roof.
Dec. 13	Francisco Dervortcher, ..	Italian,	Miner,	16	M.	1	2	Superior No. 2,	Cambria,	Instantly killed by a fall of roof.
Dec. 13	Chas. Krebs,	American, ..	Outside fireman, ..	29	M.	1	1	Webster Nos. 12-13, ..	Cambria,	Instantly killed by a boiler explosion.
Dec. 22	Wassel Hudah,	Pole,	Company man, ..	44	M.	1	2	Cambria No. 3,	Bedford,	Instantly killed by a fall of roof.

TABLE V.—List of non-fatal accidents that occurred in and about the mines of the Tenth Bituminous District for the year ending December 31, 1902.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan. 3	Peter Wurm.	American.	Miner.	29	M	Dean No. 18.	Cambria.	Leg broken by the roof falling on him.
Feb. 4	Andy Marchko.	Slav.	Miner.	27	M	Webster No. 9.	Cambria.	Leg broken by mine cars.
Feb. 4	L. W. Mellett.	American.	Company man.	29	M	Webster No. 1.	Bedford.	Injured by fall of roof.
Mar. 2	Paul Wilson.	American.	Miner.	29	M	Mitchell No. 1.	Bedford.	Leg broken by fall of roof.
Mar. 2	George White.	American.	Miner.	29	M	Stirling No. 1.	Cambria.	Collar bone broken by a fall of coal.
Mar. 2	Alfred Stahler.	Pole.	Miner.	23	M	Manchester.	Cambria.	Hip bone broken by a fall of coal.
Apr. 26	Harry Jackson.	American.	Driver.	32	M	Crescent No. 1.	Bedford.	Arm broken by being caught between car and roof.
May 30	James Murry.	Irish.	Driver.	25	M	Dean No. 8.	Cambria.	Leg broken by a car.
May 31	C. C. Edwards.	American.	Driver boy.	13	M	Crescent No. 2.	Bedford.	Laceration of the leg by a car.
May 10	Frank Comer.	American.	Driver.	29	M	Cambria No. 3.	Bedford.	Squeezed between cars inside the mine.
May 21	George Doroshok.	Austrian.	Miner.	32	M	Manchester.	Cambria.	Leg broken by car running over it.
June 21	Clyde Lyons.	American.	Driver.	23	M	Washington No. 13.	Cambria.	Leg broken by a car.
June 21	Leola Regetta.	Italian.	Miner.	22	M	Webster No. 11.	Blair.	Compound fracture of the arm by fall of roof.
July 11	John Ryan.	Irish.	Company man.	29	M	Coke Blago.	Cambria.	Leg broken by a fall of coal.
July 12	William Lavin.	Irish.	Miner.	27	M	West Branch.	Cambria.	Collar bone broken by a fall of coal.
July 12	Frank Foubert.	Italian.	Miner.	26	M	Flanagan No. 8.	Cambria.	Arm broken by a fall of coal.
Aug. 1	James McHugh.	American.	Engineer.	27	M	Suppahanima.	Cambria.	Arm broken by a fall of coal.
Aug. 1	James McMathen.	American.	Engineer.	35	M	Rag Bend.	Cambria.	Both jaws broken and skull fractured by starting the air compressor with the relief gate closed; the lever struck him.
Sept. 12	Godfred Costarholm.	American.	Leader.	14	M	Flanagan No. 8.	Cambria.	Leg broken by coal bolting on it.
Sept. 13	John Olach.	Swede.	Miner.	32	M	Manchester.	Cambria.	Leg broken by a fall of coal.
Sept. 20	John Matthespond.	Slav.	Miner.	36	M	Springer No. 1.	Cambria.	Leg broken by a fall of coal.
Sept. 20	James Hunter.	American.	Driver.	36	M	Flanagan No. 10.	Cambria.	Leg broken while riding between cars.
Sept. 20	Thomas Galsely.	Scottish.	Leader.	49	M	Flanagan No. 8.	Cambria.	Leg broken by fall of roof.
Sept. 20	Howard Reed.	American.	Company man.	27	M	Manchester No. 1.	Bedford.	Leg broken by a fall of roof.
Sept. 20	Robert Hill.	American.	Miner.	27	M	Webster No. 1.	Bedford.	Injured by a fall of roof.
Sept. 18	Edward Thompson.	American.	Miner.	22	M	Kearney No. 2.	Bedford.	Severely hurt by a blast.
Sept. 18	Robert Hughes.	American.	Miner.	22	M		Bedford.	Injured by being caught between the car and roof.
Sept. 27	Andy Frishart.	Austrian.	Miner.	26	M	Blushaker No. 13.	Cambria.	Severely injured by a fall of coal.

TABLE V—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Sept. 24	John Krlsouk,	Slav.	Miner.	33	S.	Lancashire No. 7.	Cambria.	Leg broken by fall of coal.
Oct. 1	David McNair	Scotch.	Miner.	33	S.	Victor No. 12.	Cambria.	Leg broken by fall of roof.
2	Thomas Blake, Sr.,	Scotch.	Miner.	33	M.	Albport No. 1.	Cambria.	Injured by a fall of roof by drawing pillars.
13	Thomas Blake, Jr.,	Scotch.	Miner.	18	S.	Albport No. 1.	Cambria.	Collar bone fractured by a piece of coal falling on him.
	Stephen Wlinsky.	Slav.	Miner.	27	S.	Glen White.	Blair.	Leg cut off in a chain machine.
20	Albert Gewsick,	Slav.	Mach. helper.	22	M.	Cymbria No. 1.	Cambria.	Squeezed between roof and loaded cars.
30	John Giel.	French.	Driver.	17	S.	Mitchell's No. 3.	Cambria.	Hand crushed by a fall of coal.
31	Alex. Turner.	French.	Helper.	14	S.	Widster No. 13.	Huntingdon.	Injured by coal falling on him.
Nov. 6	John Williams.	Welsh.	Miner.	59	M.	Ocean No. 1.	Cambria.	Turned by blown out shot.
8	Dennis Kirkpatrick,	American.	Miner.	23	M.	Pardee No. 5.	Huntingdon.	Collar bone broken by fall of coal.
21	Thomas Davis,	American.	Miner.	31	S.	Hicks No. 2.	Cambria.	Brick by powder while making a cart.
23	John Olexis,	Slav.	Miner.	36	M.	Greenwich No. 2.	Cambria.	Fracture of leg and injury to his spine by a fall of coal.
9	Sam Basile,	Italian.	Miner.	16	S.	Spangler No. 2.	Cambria.	
Dec. 23	Joseph Butwick,	Pole.	Miner.	25	S.	Glen White.	Blair.	

Eleventh Bituminous District.

WESTMORELAND, FAYETTE AND ALLEGHENY COUNTIES.

Scottdale, Pa., March 17, 1903.

Hon. James W. Latta, Secretary of Internal Affairs, Harrisburg, Pa.

Sir: In compliance with the provisions of the Act of Assembly, approved May 15, 1893, relating to the Bituminous coal mines of Pennsylvania, I herewith submit my annual report as Inspector of Mines for the Eleventh Bituminous District for the year ending December 31, 1902.

It contains all of the required statistical tables, together with a brief description of the mines, their condition, and the improvements completed during the year, and I am pleased to state that with but very few exceptions their general condition has been satisfactory. A detailed account is given in the description of mines; also a list of all accidents which proved fatal, with an explanation of the circumstances surrounding them. My judgment compels me to state that a very large majority of them could have been averted by the exercise of judgment and care on the part of the victims, as they were, with but very few exceptions, men who had years of experience as coal miners and should have been well qualified to care for their own safety. The number of fatal accidents for the year is thirty, twenty-nine inside and one outside, the non-fatal ones number seventy-nine, seventy-three inside and six outside.

Respectfully submitted,

W. J. MOLLISON,
Inspector.

Summary of Statistics for 1902.

Number of mines in district,	68
Number of mines in operation during 1902,	68
Number of tons of coal produced,	8,057,136

Number of tons shipped to market,	1,463,158
Number of tons sold at mines to local trade,	116,501
Number of tons consumed at mines in generating steam and heat,	145,957
Number of coke ovens in the district,	9,026
Number of coke ovens in operation during 1902,	9,026
Number of tons of coke produced,	4,255,707
Number of tons of coal used in manufacture of coke,...	6,331,520
Number of tons produced by pick mining,	7,085,978
Number of tons produced by compressed air machines,..	82,650
Number of tons produced by electrical machines,	888,508
Number of persons employed inside the mines,	6,642
Number of persons employed outside, including coke workers,	4,189
Number of persons employed at manufacture of coke,..	2,930
Number of fatal accidents inside the mines,	29
Number of tons produced for each fatal accident inside,.	277,832.27
Number of persons employed per fatal accident inside,..	229
Number of fatal accidents outside,	1
Number of persons employed per fatal accident outside,	4,189
Number of wives made widows by fatal accidents,.....	21
Number of children orphaned by fatal accidents,	64
Number of non-fatal accidents inside of mines,.....	73
Number of persons employed per non-fatal accident in- side,	91
Number of non-fatal accidents outside,	6
Number of persons employed per non-fatal accident out- side,	698.16
Number of compressed air locomotives used inside,.....	3
Number of electric motors used inside,	5
Number of fans used for ventilation,	50
Number of furnaces used for ventilation,	6
Number of gaseous mines in operation during 1902,	31
Number of non-gaseous mines in operation during 1902,.	37
Number of new mines opened in 1902,	3
Number of old mines abandoned during 1902,	2

A. Production of Coal During the Year 1902.

Names of Companies.	Tons.
H. C. Frick Coke Co.,	3,941,635
Pittsburg Coal Co.,	1,006,455
South West Connellsville Coke Co.,	1,030,005

Hecla Coke Co.,	640,848
Continental Coke Co.,	288,559
Penn Gas Coal Co.,	178,734
W. J. Rainey,	184,500
Bessemer Coke Co.,	165,326
Penn Coke Co.,	57,111
Mt. Pleasant Coke Co.,	133,249
Veteran Coke Co.,	8,738
Amyville Youghiogheny Gas Coal Co.,	24,443
Keystone Coal and Coke Co.,	1,748
J. W. Overholt & Co.,	1,359
Pennsville Coke Co.,	59,118
Cochran Bros.,	42,473
B. F. Keister & Co.,	54,845
American Sheet Steel Co.,	26,549
J. R. Stauffer & Co.,	24,138
J. W. Shields,	169,298
Bowman Bros.,	17,705
Total,	8,057,136

Production of Each County.

Tons.

Westmoreland,	6,477,333
Fayette,	1,392,800
Allegheny,	187,003
Total,	8,057,136

B. Showing the number of fatal and non-fatal accidents inside and outside the mines; number of tons of coal produced per fatal and non-fatal accident inside the mines; number of persons employed inside and outside; and the number employed inside and outside for every fatal and non-fatal accident for each company during 1902.

Names of Companies.	Number of lives lost inside.		Number of lives lost outside.		Total number of lives lost.		Number severely injured inside.		Number severely injured outside.		Total number severely injured.		Tons of coal produced per each life lost inside.		Tons of coal produced per serious injury inside.		Number employees inside of mines.		Number employees outside of mines.		Total number employed.		Number of employees inside for each life lost.		Number of employees inside for each severe injury.		Number of employees outside for each life lost.		Number of employees outside for each severe injury.	
	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
H. C. Frick Coke Co.,	13				12	7	1		1		7		303,203		553,091		3,014		2,207		5,221		221.8		430.7					
Pittsburg Coal Co.,					3						2		235,485		1,006,455		971		220		1,191		379		1,191					
Southwest Connellsville Coke Co.,					6				1				171,668				760		617		1,377		126.6							
Hoelsa Coke Co.,					5								128,170				482		316		798		96.4							
Continental Coal Co.,					1						1		144,280		238,559		243		167		410		248		248		167			
Penn Gas Coal Co.,																														
W. J. Radney,																														
Bessemer Coke Co.,																														
Penn Coke Co.,																														
Mt. Pleasant Coke Co.,																														
Veteran Coke Co.,																														
Ameyville-Youghiogheny Gas Coal Co.,																														
Keystone Coal and Coke Co.,																														
Pennsylvania Coke Co.,																														
Corran Bros.,																														
Lehigh Valley Coal Co.,																														
American Sheet Steel Co.,																														
J. B. Stauffer & Co.,																														
J. W. Overholt & Co.,																														
J. W. Shields,	1				1	1	1				1		169,298		169,298		199		31		230		199		199					
Bowman Bros.,																														
Totals and averages,	29				30	10	1		1		11		277,832		805,714		6,642		4,189		10,731		299		664.2		4,189		418.9	

D. Classification of Non-fatal Accidents for the Year 1902.

	Inside of Mines.										Outside of Mines.						(Grand total.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	By Falls of			By mine cars.	By explosion of gas.	Smothered by gas.	Powder and dynamite.	By blasts, etc.	By Falling into			Crushed at batteries.	By mules.	Suffocated by coal, etc.	Miscellaneous causes.	Total inside.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
	Coal.	State.	Roof.						Shafts.	Slopes.	Manways, breasts, etc.							Total outside.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
January,	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	

G. Nationality of Employees Killed or Fatally Injured Inside and Outside the Mines During 1902.

	Americans.	English.	Scotch.	Germans.	Poles.	Hungarians.	Italians.	Slavs.	Austrians.	Russians.	Totals.
January,	1					1					2
February,	1				1				2		4
March,	1			1			1	2		1	5
April,	1				1						3
May,	1							1			2
June,	1										1
July,	1							1			2
August,	1										1
September,	1					1	1				3
October,	2				1						3
November,			1					1		1	3
December,											0
Totals,	7	1	1	1	3	2	2	3	2	1	22

H. Nationality of Employees Severely Injured Inside and Outside the Mines During 1902.

	Americans.	English.	Welsh.	Germans.	Poles.	Hungarians.	Italians.	Slavs.	Austrians.	Swedes.	French.	Czechs.
January,	2				1			1	1			
February,	2			1			1		1			
March,	3			3	1	1						
April,	1	1					1	2				
May,	1	1						1				
June,	1			2	1						1	
July,	1											
August,	1		1		1	1			1			1
September,	1				1		1					
October,	5			1	1		1	2				
November,	2	1				1		1	1			
December,	3	2			2							
Totals,	24	5	2	7	10	3	4	17	4	1	1	1

1. Giving names of operators and mines, kind of openings, type and size of fans; size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each employee per minute in Eleventh Bituminous district for the year 1902.

Names of Operators and Mines.	Kind of opening.	(Gaseous or non-gaseous.	Method of ventilation.	Diameter and width of fan In feet.	Water gauge developed—in inches.	Name of fan.	Power used.	Area of furnace bars in square feet.	Number of air splits of air currents.	Number of cubic feet of air per minute entering the mine at inlet.	Total quantity of air per minute circulating in all the splits in cubic feet.	Number of cubic feet per minute passing out at out- let.	Number of persons employed inside.	Average number of cubic feet per minute provided for each person.
H. C. Frick Coke Co.														
Alverton No. 1.	Slope.	Non-gas.	Fur. fan.	12	3½	Brazil.	Steam.	20	3	64,000	24,890	66,225	121	185
Alverton No. 2.	Drift.	Non-gas.	Fan.	12	3	Brazil.	Steam.			38,200	13,300	22,040	46	292
Bessemer Nos. 1 and 2.	Drift.	Non-gas.	Fan.	12	3	Brazil.	Steam.			36,750	20,850	41,100	100	298
Buckeye.	Drift.	Gaseous.	Fan.	12	3½	Brazil.	Steam.			31,000	30,290	41,190	176	173
Calumet.	Shaft.	Gaseous.	Fan.	20	3½	Vulcan.	Steam.			103,620	66,170	105,000	184	379
Central.	Slope.	Gaseous.	Fan.	20	1	Vulcan.	Steam.			79,610	24,410	72,000	165	118
Diamond.	Drift.	Non-gas.	Natural.							8,900	6,240	9,000	27	231
Enterprise.	Drift.	Non-gas.	Natural.							10,080	7,830	11,270	26	301
Jintown and Sterling No. 2.	Drift.	Non-gas.	Fan.	16	4	Noneless.	Steam.			62,000	16,315	66,800	82	198
Mammoth shaft.	Shaft.	Gaseous.	Fan.	25	3½	Brazil.	Steam.			135,000	69,131	145,000	309	223
Mammoth slope.	Slope.	Gaseous.	Fan.	12	1½	Brazil.	Steam.			53,000	7,125	24,070	49	145
Mutual No. 1.	Drift.	Non-gas.	Fan.	12	3½	Brazil.	Steam.			35,830	5,175	11,000	49	207
Mutual No. 2.	Drift.	Non-gas.	Fan.	12	3½	Brazil.	Steam.			35,830	14,000	17,000	52	271
Mutual No. 3.	Drift.	Non-gas.	Fan.	12	3½	Brazil.	Steam.			35,830	28,250	37,000	82	371
Mutual No. 4.	Drift.	Non-gas.	Fan.	12	3½	Brazil.	Steam.			53,200	28,310	38,000	113	251
Painter.	Drift.	Non-gas.	Fan.	16	8	Vulcan.	Steam.			61,000	52,380	62,640	155	337
Rist.	Slope.	Non-gas.	Fan.	16	6	Vulcan.	Steam.			9,225	9,225	11,400	20	401
Rising Sun.	Drift.	Non-gas.	Natural.							19,200	6,950	15,310	71	157
Ruff.	Drift.	Non-gas.	Fan.	25	3½	Brazil.	Steam.			186,550	77,290	195,000	489	157
Standard shaft.	Shaft.	Gaseous.	Fan.		1.35	Vulcan.	Steam.			36,110	31,350	38,000	121	157
Standard slope.	Slope.	Gaseous.	Fan.											
Sterling No. 1.	Drift.	Non-gas.	Natural.											
Summit.	Drift.	Non-gas.	Fan.	12	3½	Brazil.	Steam.			32,000	7,800	34,800	51	153
Tip Top.	Drift.	Non-gas.	Fan.	12	3½	Brazil.	Steam.			39,000	15,370	40,800	59	270
United.	Shaft.	Gaseous.	Fan.	20	7	Vulcan.	Steam.			75,200	49,560	78,000	223	222

Valley,	Drift,	Non-gas,	Fans,	(12 x 31 1/2 12 x 32 12 x 3 1/2)	4 .65 .15	Brazil,	Steam,	70,000 37,000	48,110 18,380	71,580 39,400	127 85	378 216
White,	Drift,	Gasous,	Fan,	9 x 7	1.5	Capell,	Electricity,	20,000 27,000	24,200 28,500	24,200 28,500	90 99	135 127
Pittsburg Coal Co.	Drift,	Gasous,	Fan,	6 x 2	.15	Clark,	Electricity,	61,000	37,175	93,900	139	207
Big Chief,	Drift,	Non-gas,	Fan,	16 x 6	2	Clark,	Steam,	55,000	29,010	57,370	89	236
Guifey,	Drift,	Gasous,	Fan,	16 x 7	2	Clark,	Steam,	45,000	18,275	46,200	132	138
Eur-ka,	Drift,	Gasous,	Fan,	16 x 7	2	Clark,	Steam,	41,125	11,310	43,400	61	176
Fuelad,	Drift,	Gasous,	Fan,	25 x 8	1.7	P. Block,	Steam,	39,000	15,400	43,400	62	166
Coan No. 1,	Drift,	Gasous,	Fan,	12 x 2 1/2	.8	Brazil,	Electricity,	39,000	15,400	43,400	61	177
Port Royal No. 1,	Drift,	Gasous,	Fan,	20 x 8	1.7	Brazil,	Steam,	49,400	21,700	51,000	131	224
Port Royal No. 2,	Drift,	Non-gas,	Fan,	12 x 4	1.1	Irwin,	Steam,	49,000	36,180	51,000	110	228
Shaner slope,	Drift,	Gasous,	Fan,	25 x 9	4.2	Vulcan,	Steam,	49,200	36,875	55,000	274	194
Waverly,	Drift,	Gasous,	Fan,	18 x 6	1.75	Vulcan,	Steam,	27,750	26,780	32,000	135	220
Young slope,	Drift,	Gasous,	Fan,	18 x 6	1.75	Vulcan,	Steam,	41,300	32,850	51,000	130	204
South West No. 1, A,	Drift,	Gasous,	Fan,	20 x 7	.8	Vulcan,	Steam,	43,200	26,210	45,000	83	208
South West No. 1, B,	Drift,	Gasous,	Fan,	18 x 6	4	Vulcan,	Steam,	112,300	66,435	115,000	255	217
South West No. 2,	Drift,	Gasous,	Fan,	20 x 7	.8	Vulcan,	Steam,	45,000	43,200	47,000	131	287
South West No. 3,	Drift,	Gasous,	Fan,	18 x 6	1.75	Capell,	Steam,	11,120	7,020	14,120	43	173
South West No. 4,	Drift,	Gasous,	Fan,	15 x 7	1	Capell,	Steam,	70,300	60,000	82,000	157	209
Holla Coke Co.	Drift,	Non-gas,	Furnace,	11 x 11	45	Capell,	Steam,	45,000	11,200	47,200	77	408
Holla No. 1,	Drift,	Gasous,	Fan,	15 x 8	5	Irwin,	Steam,	27,000	17,000	28,000	11	238
Holla No. 2,	Drift,	Gasous,	Fan,	15 x 8	5	Irwin,	Steam,	2,000	12,100	24,100	80	180
Holla No. 3,	Drift,	Gasous,	Fan,	9 x 7	4	Capell,	Steam,	21,000	28,000	71,000	91	352
Holla No. 4,	Drift,	Gasous,	Fan,	15 x 12	14	Brazil,	Steam,	11,000	5,000	13,000	5	271
Centennial Coke Co.	Drift,	Non-gas,	Furnace,	15 x 12	14	Brazil,	Steam,	22,000	12,000	24,000	53	145
Marguerite No. 1,	Drift,	Non-gas,	Furnace,	15 x 12	14	Brazil,	Steam,	14,400	7,500	16,000	29	237
Marguerite No. 2,	Drift,	Non-gas,	Furnace,	12 x 12	1	Non-gas,	Steam,	1,000	1,000	15,000	20	156
Penn. Gas Coal Co.	Drift,	Non-gas,	Furnace,	12 x 12	1	Brazil,	Steam,	10,000	20,000	20,000	71	271
Avoca Hill W.,	Drift,	Non-gas,	Furnace,	12 x 12	1	Brazil,	Steam,	14,400	7,500	16,000	29	237
Penn. Gas No. 1,	Drift,	Non-gas,	Furnace,	12 x 12	1	Brazil,	Steam,	1,000	1,000	15,000	20	156
Penn. Gas No. 2,	Drift,	Non-gas,	Furnace,	12 x 12	1	Brazil,	Steam,	10,000	20,000	20,000	71	271
W. J. Bales	Drift,	Non-gas,	Furnace,	12 x 12	1	Brazil,	Steam,	14,400	7,500	16,000	29	237
Arme,	Drift,	Non-gas,	Furnace,	12 x 12	1	Brazil,	Steam,	10,000	20,000	20,000	71	271
Union,	Drift,	Non-gas,	Furnace,	12 x 12	1	Brazil,	Steam,	14,400	7,500	16,000	29	237
Eastmore Coke Co.	Drift,	Non-gas,	Furnace,	12 x 12	1	Brazil,	Steam,	10,000	20,000	20,000	71	271
Hampton,	Drift,	Non-gas,	Furnace,	12 x 12	1	Brazil,	Steam,	14,400	7,500	16,000	29	237
Green Coke Co.	Drift,	Non-gas,	Furnace,	12 x 12	1	Brazil,	Steam,	10,000	20,000	20,000	71	271
Green,	Drift,	Non-gas,	Furnace,	12 x 12	1	Brazil,	Steam,	14,400	7,500	16,000	29	237
Hammer,	Drift,	Non-gas,	Furnace,	12 x 12	1	Brazil,	Steam,	10,000	20,000	20,000	71	271
Mr. Pleasant Coke Co.	Drift,	Non-gas,	Furnace,	12 x 12	1	Brazil,	Steam,	14,400	7,500	16,000	29	237
Bayer,	Drift,	Non-gas,	Furnace,	12 x 12	1	Brazil,	Steam,	10,000	20,000	20,000	71	271
Veteran Coke Co.	Drift,	Non-gas,	Furnace,	12 x 12	1	Brazil,	Steam,	14,400	7,500	16,000	29	237
Veteran,	Drift,	Non-gas,	Furnace,	12 x 12	1	Brazil,	Steam,	10,000	20,000	20,000	71	271

TABLE I—Continued.

Names of Operators and Mines.	Kind of opening.	Gaseous or non-gaseous.	Method of ventilation.	Diameter and width of fan in feet.	Water gauge developed—in inches.	Name of fan.	Power used.	Area of furnace bars in square feet.	Number of air splits of air currents.	Number of cubic feet of air per minute entering the mine at inlet.	Total quantity of air per minute circulating in all the splits in cubic feet.	Number of cubic feet per minute passing out at out- let.	Number of persons employed inside.	Average number of cubic feet per minute provided for each person.
Amyville-Youghiogheny Gas Amyville, Coal Co.	Drift,....	Non-gas.	Fan,....	12 x 3½	.3	Brazil,	Steam,.....	.....	1	18,800	7,535	10,000	86	91
Keystone Coal and Coke Co. Hunker,	Drift,....	Non-gas.	Natural,	.....	.....	.....	.....	.....	1	6,000	6,000	6,000	13	461
Pennsylvania Coke Co. Pennsylvania,	Drift,....	Non-gas.	Fan,....	12 x 3½	.15	Brazil,	Steam,.....	.....	1	17,775	4,700	19,000	43	109
Cochran Bros. Spring Grove,	Drift,....	Non-gas.	Natural,	.....	.....	.....	.....	.....	1	5,400	5,400	6,675	29	136
B. F. Kelster & Co. Franklin,	Drift,....	Non-gas.	Furnace,	.....	.....	.....	.....	16	1	9,856	9,856	12,650	24	410
American Sheet Steel Co. Scottsdale,	Drift,....	Non-gas.	Fan,....	12 x 3½	.35	Kenny,	Steam,.....	.....	1	28,000	10,560	27,890	25	432
J. R. Stauffer & Co. Dexter,	Drift,....	Non-gas.	Furnace,	.....	.....	.....	.....	9	1	6,000	6,100	6,100	17	385
J. W. Shields. Osceola,	Drift,....	Gaseous.	Fan,....	16 x 6	1.2	Robinson, ..	Steam,.....	.....	2	67,000	21,875	59,200	139	110
Bowman Bros. Bowman,	Drift,....	Non-gas.	Natural,	.....	.....	.....	.....	.....	1	8,000	7,280	8,388	14	525

Description of Fatal Accidents which Occurred in and About the
Mines of the Eleventh Bituminous District During the Year 1902.

January 17, Bert Nix killed instantly by falling slate; victim was employed in company with an older brother and their father. The father had been in the place on the morning of above date and had taken down all slate. A short time after, the father went into the place and discovered the boy under the slate dead. Evidently he had taken a pick and gone under the slate for the purpose of undermining coal.

January 27, George Fischer killed instantly by a fall of roof; victim was employed drawing a rib, and while he was drawing the posts for the purpose of causing a fall of roof, an unforeseen horseback slip caused the roof to break suddenly and he was caught.

February 17, George Gurickski killed instantly by a fall of roof and slate; victim was employed drawing heading stumps, and had mined out considerable coal from each side of the heading, making the space about fifteen feet in width, but neglected to place any posts for protection.

February 24, George Pensock killed instantly by falling coal and slate. Victim was employed mining coal in a room twelve feet wide, and the last post was placed twelve feet from the coal face, but several unseen slips in the slate traversed the unsupported space, causing it to break.

March 4, Samuel Slavinski, Andrew Shultz and Moses Valdenso, miners, killed instantly by falling from the cage down the shaft. Victims were ascending the shaft on the cage in company with eleven other persons, none of whom knew that an accident had occurred, except one who testified that the last of the three grasped at him. It is not known which one was caught first, or how it occurred that he was caught, but it seems probable that he was standing carelessly, without holding the hand bar, and he staggered, catching the man next to him, and he catching the third man, and all were hurled to the bottom. Coroner of Westmoreland county held an inquest, when the jury rendered the following verdict:

"The jury further finds that the laws and rules regulating bituminous mines were fully complied with, and no blame whatsoever for said accident attaches to said company."

March 11, Leo Hagedon was fatally injured by falling slate; victim was employed loading coal from a room, and while so engaged slate fell on him, inflicting injuries which resulted fatally two hours later.

March 8, Andrew Stanislov killed instantly by a fall of horseback roof; victim was employed drawing a rib when a large horseback slip which traversed the place, caused the roof to break suddenly.

April 2, Fred Hass killed instantly by a fall of roof; victim was employed drawing a rib and had drawn all of the posts, but the same did not fall. Men working in the next place heard the roof fall, and upon going into the place they discovered his coat and dinner bucket, and gave the alarm, and a force of workmen began to remove the fall, which took several hours, when the body was recovered about seven feet from the corner of the pillar. A pick was found with the body, which indicated that he had gone into the interior end of the fall for the purpose of cutting the coal stump.

April 5, Michael Sehanik fatally injured by mine cars. Victim was employed as assistant cager and gave the engineer a signal to cut off the steam from the dilly engines, but failed to give the signal in due time, and the line was detached under a great strain, causing the same to bound forward, the chain striking him and knocking him down in front of the trip, several of the cars passing over him. He was removed to his home and from there to the Connellsville Cottage Hospital, at which place he died on the following day.

April 18, Michalletto Batiste killed instantly by falling slate; victim was employed loading coal from a room; he was pulling down coal under the slate without having it properly posted, and in falling it caught him.

April 25, Michael Heriezkovion fatally injured by mine cars. The statement made by the driver Joseph O'Grodney was that he was coupling cars at the mouth of the butt entry and heard some person speak in front of the horse, and called to him to get out of the road; he heard some person answer, but did not understand what he said; he started the horse and directly the trip stopped, and victim was caught between the cars and the pillar.

May 9, Michael Danchak fatally injured by a fall of coal and slate; victim was employed drawing a split rib. He had not cut any coal, but was merely sounding the roof, when suddenly the stump crushed down and the roof coal and slate falling caught him, covering him completely, except his head; he was extricated and died one hour later.

May 21, John Rubisna killed instantly by a fall of coal and slate; victim was employed drawing a rib in company with Andrew Christian; they were starting at an old crosscut in the room pillar, where the roof was somewhat cracked and drawn, and it appeared to have been reasonably well posted, but they were just starting the shift in the morning and did not make any examination of the roof. Victim was kneeling down in the roadway cleaning some dirt from the rails, when suddenly the roof fell.

May 21, Alexander Ramsey fatally injured by mine cars; victim was employed as driver and was coming out with a trip of loaded

cars, and tripping he fell in front of the cars, and died five hours later.

June 2, Thomas Doll killed almost instantly by a fall of roof. Victim was employed drawing stumps and chain pillar, and while attempting to draw the first one the roof coal and slate broke and a portion falling caught him and held him fast, and in a very short space of time and before he could be extricated, a fall of the upper roof occurred, covering him completely, killing him instantly.

July 23, Michael Yaczko, killed instantly by a fall of roof. Victim was employed drawing a rib, and had drawn out enough of coal to cause a fall of roof, but the posts should have been withdrawn on the evening previous, but he did not do so, and on the fatal morning the place was crushing and breaking the posts, but it was not falling quickly enough to suit victim, and taking an axe he went under the roof for the purpose of cutting some of the posts, and while doing so the roof broke and caught him.

August 4, W. L. Kerfoot fatally injured by mine cars. Victim was employed driving a horse and the track being down grade, the trip was running at a high rate of speed, and he was riding upon the front end of the front car, and upon reaching No. 3 room the cars turned into the parting of the same, the horse continuing on straight up the heading. The cars were thrown from the track and he was caught between them and the room pillar, receiving injuries which proved fatal eleven days later.

August 22, James Robinson fatally injured by mine cars. Victim was returning from work and was walking upon the electric motor haulage way, and was at a point about two hundred feet outside of No. 2 butt entry; the motorman saw a light ahead, turned off the power, applied the brake, but was unable to stop on account of the grade. The motor passed by without injuring him, merely touching his clothing, but the applying of the brake had thrown some of the cars from the track, and the cars coming along next to the pillar caught the victim. David Jones, mine foreman, was riding upon the motor also, and upon reaching the end of the grade got off, and returning back along the track discovered the cars off the track and victim standing between two of them. He was removed to his home, a physician was summoned who made an examination and stated that a compound fracture of one arm, and one knee injured were all the injuries that he could discover, but death resulted five hours later.

August 27, Joseph Senenete, miner, killed instantly by a fall of roof. Victim was employed drawing a rib and at time of accident was making the first fall of the rib and had drawn all of the posts except two, which had been left standing in near to the face of the room, and as the roof did not fall immediately, victim went around

into next room to crosscut, and attempted to draw two posts, and the roof falling suddenly he was caught.

August 29, John Hrenyo, miner, fatally injured by fall of slate and horseback. Victim was employed cutting coal from the side of the pillar for the purpose of making room to cut a drain alongside of the track. This point was directly opposite the entrance of an old butt heading, at which place the roof coal and slate had fallen out some time previous, but it must have been cracked a short distance in over the coal, and as victim removed the coal, a portion of the roof fell, inflicting injuries which proved fatal two hours later.

September 13, Nelson Nichols, carpenter, fatally injured by a piece of wood thrown from a circular saw. Victim was employed in the mine repair shop, and was engaged ripping some pieces of wood at a circular saw, and one of them was caught by the saw and thrown violently, striking him upon the breast and jaw; he was removed to his home where he died about thirty minutes later.

October 2, Andrew Williams killed instantly by falling coal and slate. Victim had mined several carloads of coal and had one post placed under the roof, which would have been sufficient to support it if the place had not been in such a crushed condition.

October 10, James Jones killed almost instantly by fall of coal and slate. Victim was employed drawing a rib in company with his two sons. They had drawn enough of space to cause another fall of roof, but had not drawn any of the posts. They had just loaded a car, when a piece of roof coal fell and caught him. He was extricated very soon, but died twenty minutes later.

October 27, John Shober killed instantly by falling roof; victim was engaged drawing entry stumps; the place was crushing, especially on one side. Wm. Gramlick and Frank Leister, roadmen, were present waiting to remove the track. They warned victim to be careful, but he went into the crushed side to shovel some loose coal, when the roof fell and caught him.

October 31, Charles Gratche fatally injured by mine cars; victim was employed driving a string team of two horses, and was coming out with a trip of cars, riding upon the front end of the front car, and upon reaching a point on the haulingway where the track made a curve, he had gotten caught by the cars, but had extricated himself. He was found by John Budner, the driver next behind him; he was conscious and made the statement that upon reaching the curve the hook of his riding iron slipped from the car and he fell upon the track and the front car ran upon him. He was removed to his home where he died twelve hours later.

November 4, Julius Demyon killed instantly by falling coal and slate; victim was employed drawing heading stumps. Thomas Easton, mine foreman, had visited the place about forty minutes

previous to occurrence, and had instructed him that he should not remove any more coal from the stump on the right side, and he started to work on the left side, and immediately the roof coal and slate fell and caught him.

November 4, James Fullerton killed instantly by falling coal and slate. Victim was engaged in placing posts near to where the pillars were being removed. A portion of the roof coal and slate had fallen, and he was placing a post under the portion which still remained up, when the roof fell and caught him with result as stated.

December 4, Stephen Budner was fatally injured by fall of coal and slate; victim was placing a row of posts alongside of the track; the last post was placed five and a half feet from the coal face which was somewhat crushed, a large slip in the slate traversed the place a few inches in advance of the crushed coal face, and as he mined away the coal the roof fell and he was caught; his injuries were not considered of a serious nature as he walked home unassisted, but proved fatal twenty hours later.

Special.

The following does not come under the head of regular mine accidents, therefore according to instructions received from the Bureau of Mines, it is reported under the head of specials:

Hecla Mine No. 3 main hoisting shaft was being opened by the firm of Patterson & McNeil, contractors, the shaft had reached the destination and a swinging scaffold had been constructed and upon it were working three men, Nicholas Vandeloo, foreman, German, Herbert Alexander and Joseph Hicks, colored, laborers. They were hoisted and lowered by means of a wire rope and a small sinking engine, and were engaged in straightening up the lagging and removing all debris from the framing timbers. They had completed one compartment and were descending upon the other side, and upon reaching a point about one hundred and twenty feet from the top a pump was arranged supported by chains, to pass which it was necessary to list the scaffold to one side, and in so doing the wire rope which supported the scaffold had slipped to one side upon the hook of the main hoisting rope, and after passing the pump the scaffold remained listed, and in attempting to right it Vandeloo and Alexander fell from the scaffold to the bottom of the shaft, a distance of about one hundred and seventy feet, being instantly killed. The accident was certainly caused by carelessness on the part of the victims, as there were four wire ropes, one supporting each corner, which they could have held to, as did the other person.

Coroner of Westmoreland county held an inquest upon the result, when the following verdict was rendered.

The jury find that the accident was due to carelessness on the part of the victims in not exercising more care under such dangerous circumstances.

Description of mines located in the Eleventh Bituminous District, with a report of general condition, together with the improvements during the year 1902:

Mines Located on and Near the Main Line of the Baltimore and Ohio Railroad.

Osceola.—Drift opening, Pittsburg low seam. On each visit the ventilation has been fair, with drainage satisfactory. In computing the table giving the average number cubic feet of air furnished per each employe, I have used the number given in the operators annual statement, which is much greater than the number reported to me upon any of my visits, which is due to the fact that a large percentage of the employes are engaged at night in a different air current, which explains the difference between the inspection and annual reports.

Big Chief, Guffey and Shaner Slope mines.—The two former drift openings and the latter a slope. These three mines have been ventilated by means of one fan, and the result has not been satisfactory. The difficulty has been sometimes in one mine and sometimes in the other. But since my last visit another fan has been installed in Shaner slope mine, to ventilate that separately, giving the entire power of the other fan to ventilate Big Chief and Guffey mines, and I am informed that the result is very satisfactory. The drainage of Big Chief and Guffey has been satisfactory, but somewhat defective in Shaner slope.

Ocean No. 1.—Drift opening, Pittsburg low seam. On some visits I have found satisfactory ventilation for the number of persons employed, and on others I have found it defective, the conditions being governed greatly by the number of persons employed; drainage fair.

Ayers Hollow.—Drift opening, Pittsburg low seam; ventilation and drainage satisfactory.

Amyville.—Drift opening, Pittsburg low seam. The original opening of this mine underwent the experience of a mine fire, and as predicted in last report, the operator was compelled to abandon the original opening and enter the territory by means of the opening of the old Republic (or Candy mine, main heading). A force fan has been placed, which tends to force the fire towards the original openings, while the pillars are retreating from the same. Upon my last visit the ventilation was very fair, but according to the number of employes returned by the operators annual statement, it will appear that the register taken at the time would be somewhat inadequate at present, if the quantity has not been increased, which

result is due to the employment of a greater number of persons since my last visit. Drainage fair.

Penn Gas No. 4.—Drift opening; ventilation satisfactory, but drainage somewhat defective.

Penn Gas. No. 3.—Slope opening. This is an old mine re-opened, was formerly opened by means of a shaft, but had not been in operation for twenty years or more. The equipment consists of steam plant, three West Point tubular boilers, 100 horse power each. Hoisting plant consists of a double train of endless sprocket chains, driven by a Huston Stanwood engine 14" by 30". The coal is mined by Jeffrey compressed air machines; the power is generated by two Hall compressors, diameter of cylinders, steam 23", air low 22", high 14", stroke 18". The pumping plant consists of two Hall double acting pumps.

Yough slope.—Slope opening. Ventilation satisfactory. Drainage satisfactory when the pumps are kept running constantly. A reaction of a former creep developed, which closed No. 1 butt entry North side, and for a time threatened the main tunnel, but with extra efforts and timber it has been arrested for the present. During the year the tippie was pulled down by a B. & O. R. R. train, and it has been replaced by a more modern structure.

Euclid.—Shaft opening. On each visit the ventilation has been satisfactory for number of persons employed. Drainage satisfactory.

Port Royal No. 1.—Shaft opening. On each visit the ventilation has been satisfactory for number of persons employed. Drainage satisfactory.

Port Royal No. 2.—Shaft opening. On each visit the ventilation has been satisfactory for the number of persons employed; drainage adequate. The No. 5 and 6 face section, in which the explosion occurred on June 10, 1901, has not been put in active operation since that time, owing to the falling in of Nos. 24 and 25 butt entries, which prevented the proper ventilating of the same; but at the close of the year Nos. 28 and 29 butts were almost connected, which will remove that difficulty. Those two mines continue to be worked with the use of locked safety lamps, and I am highly pleased to state that not a single accident has been reported from either mine during the year 1902, while all of the adjoining mines where open lights are used have had occasional accidents, as will be observed by table on accidents.

Waverly.—Shaft opening. On each visit the ventilation and drainage has been in fair condition.

Eureka.—Drift opening. Ventilation and drainage satisfactory upon all visits.

Spring Grove.—Drift opening, Connellsville seam; ventilation and drainage satisfactory.

Jimtown.—Drift opening. Retreating with ribs, stumps and pillars, and owing to the system of conducting the mine in former years, it is very difficult to keep the ventilation up fully to the standard at all times. On some inspections I have found it perfectly satisfactory, while on others it has been somewhat defective in some portions, but generally as good as could be expected under the circumstances.

Sterling No. 1.—Drift opening. An old opening which was operated about three months during the year, and has been exhausted, and when visited the employes were all working very near to the entrance, and the condition was satisfactory. There is still remaining some unmined coal in connection with this plant, which at some future date will be removed by means of another opening.

Mines Located on and Near the Mt. Pleasant Branch of the B. & O. Railroad.

Rist.—Slope opening; ventilation and drainage satisfactory.

White.—Drift opening. An air shaft has been opened during the year which has improved the ventilation to some extent, and during the year the ventilation and drainage have been fair.

Summit.—Drift opening; retreating with ribs, stumps and pillars; condition of ventilation and drainage fair.

Franklin.—Drift opening; ventilation and drainage satisfactory.

Tip top.—Drift opening; Connellsville coking seam; ventilation and drainage have been fair.

Scottdale.—Drift opening; ventilation and drainage satisfactory.

Dexter.—Drift opening. During the early portion of the year the ventilation was not altogether satisfactory, but later an air shaft was opened near the face of the present workings, which provides ample ventilation; drainage satisfactory.

Painter.—Drift opening; ventilation and drainage satisfactory.

Diamond.—Drift opening; withdrawing with ribs, stumps and pillars; ventilation and drainage fair.

Mullin.—Drift opening; ventilation and drainage fair.

Mines Located on and Near the Scottdale Branch of the P. R. R.

Rising Sun.—Drift opening; retreating with stumps and pillars; ventilation and drainage fair.

Bessemer Nos. 1 and 2.—Drift openings; retreating with ribs, stumps and pillars; ventilation fair; drainage somewhat defective in some portions.

South West No. 2.—Slope opening, Connellsville coking seam; condition of ventilation satisfactory, and drainage fair on all inspections.

South West No. 1 B. Shaft opening; ventilation and drainage fair.

South West No. 1 A.—Shaft opening. Ventilation and drainage satisfactory. Improvements installed are three tubular boilers, re-

placing cylinder boilers, a large extension to the underground pump room, built of masonry, one Janesville duplex pump 15"x20"x36", three Lepley pumps, 15"x20"x36", and the extension of the main haulage for a distance of 2,200 feet.

Acme.—Shaft opening; ventilation and drainage fair.

Buckeye.—Drift opening. Ventilation satisfactory, with the exception of a few minor details, and drainage fair.

Standard Shaft and Slope.—These two mines are directly connected and have been ventilated by one fan, and while the ventilation has been improved somewhat during the year, yet in some portions it has not come up fully to the requirements, but as stated in my report of 1901, it was decided by the company to place an additional fan, which I am pleased to state has been done, but on my last inspection for the year it had not been put in operation, but since that time I have been officially notified that it has been put in operation, and I judge the result will be such as will bring the ventilation fully up to the requirements. Drainage has been satisfactory.

Mines Located on and Near the South West Branch of the P. R. R.

Pennsville.—Drift opening. Ventilation and drainage fair.

Valley.—Drift opening. Ventilation has been excellent and drainage satisfactory. A reaction of a former creep or squeeze took place during the year, which resulted in the closing of a portion of the South West main haulage and suspended operations in that portion of the mine for several days, but it has been reopened and timbered in a safe and satisfactory manner, and operations continued as usual.

Enterprise.—Drift opening. Ventilation and drainage fair.

Union.—Drift opening. Ventilation fair with but a few minor exceptions. Drainage satisfactory.

Alverton No. 1.—Slope opening. Ventilation satisfactory in some parts, and fair in the others; drainage satisfactory.

Alverton No. 2.—Drift opening. Ventilation in the early portion of the year was somewhat defective, but since that time a fan has been installed, displacing the furnace formerly in use, and on my last inspection the ventilation and drainage were satisfactory.

South West No. 4.—Drift opening. With but a few minor exceptions the ventilation and drainage satisfactory.

South West No. 3.—Drift opening. Ventilation and drainage satisfactory.

Ruff.—Drift opening. On some inspections the ventilation was not fully up to the requirements in all portions, but the mine has been abandoned. The remaining coal will be taken out by the way of South West mine No. 3.

Central.—Slope opening. Ventilation has been fair and drainage satisfactory on each inspection during the year. Extensive improve-

ments have been completed by installing more boiler power. A new slope has been completed with new main haulage to the interior of the mine, paralleled by a new traveling way throughout, with the system of ventilation entirely remodeled. Large new bins have been erected and a large powerful hauling plant. The changes had not taken place at the date of my last inspection, but I am satisfied that they will verify the prediction made in my annual report of 1901, and will place the mine amongst the best mines in the district.

Empire.—Drift opening. With but few exceptions the ventilation and drainage has been satisfactory.

Hunker.—Drift opening. New mine located one-fourth mile south of Hunker station on the line of the South West Branch P. R. R. When inspected the ventilation and drainage were satisfactory, but as the mine was not developed to any great extent, it cannot yet be determined what degree of success will be accomplished in mining the seam at this point, as at present they are experiencing considerable difficulty in the way of faults and rolls.

Mines Located on and Near the Sewickley Branches of the P. R. R.

Boyer.—Drift opening. During the early portion of the year I had cause to complain of the ventilation caused by the delay in having the fan placed, but since on inspection I have found the ventilation and drainage perfectly satisfactory.

Hecla No. 1.—Shaft opening. Ventilation has been satisfactory, with drainage fair.

Hecla No. 3.—Shaft opening. New mine located one-half mile south of the village of Hecla. Opened and equipped as follows: Hoisting shaft, size 10'4"x24'4". Depth from surface to bottom of coal 268 feet. Steel head frame, height 92'. Pulleys, diameter 10'. Hoisting cable, diameter 1½". Cages, self dumping. Hoisting engines, size of cylinders, 24"x48". Drums, conical diameter, large end 10', small end 8'. Boiler house, brick, size 40'x106'. Boilers, tubular, three horse power 150 each. Blacksmith and repair shop, brick, 36x100. Air shaft, size 10'x4"x16'x4". Depth from surface to bottom of coal, 282'. Capell fan, diameter 15', width 7'. Lamp house, brick, 16'x18'. Oil house, brick, size 16'x18'.

Hester.—Drift opening. Ventilation and drainage satisfactory. A tail rope haulage has been installed, and a twelve-foot Brazil fan has replaced a four-foot Stine fan formerly used.

Mutual No. 4.—Drift opening; ventilation and drainage excellent.

Calumet.—Shaft opening. The ventilation and drainage have been very much improved during the year, and on my last inspection the ventilation was excellent throughout the entire mine, except in the

old No. 5 butt west, where it was fair, with drainage satisfactory. A new extension of the endless rope haulage has been completed.

Mammoth Slope.—Slope opening. Ventilation and drainage satisfactory. A double track gravity plane has been arranged inside, for the purpose of dropping the loads down and pulling the empty cars up from one flat to the other, there being an average grade of 9 per cent., which proves to be a great advantage under prevailing conditions.

Mammoth Shaft.—Shaft opening. With but few minor exceptions the ventilation and drainage has been satisfactory. The main dip haulage has been extended, which has increased the haulage facilities.

United.—Shaft opening.—The ventilation has been satisfactory during the year. The underground pumping plant has been improved and the air motor haulage extended.

Hecla No. 2.—Shaft opening. The ventilation was excellent in some portions, while it has been somewhat defective in others, but as a whole may be considered fair and drainage satisfactory.

Clare.—Drift opening. Upon visiting this mine on May 31st, I discovered that the ventilation was defective, and also that there was not a certificated mine foreman in service as required by law, but by inquiry from the man in charge, I learned that the foreman had resigned a day or two previously and that the Superintendent, M. L. Painter, had informed him that a foreman had been engaged, who would report for duty in a day or two, and that they would have a fan in operation in a short time, and as they were engaged in opening a shaft on which the fan could be placed, I considered that they were making an effort to comply with the requirements of the law. On visiting the mine again on July 24th, I learned that during the entire time since my last visit they did not have a legal mine foreman, neither did they have any means of ventilation, and very little progress had been made in that direction since my previous visit, but again I was informed that those in charge were expecting a foreman, and fan also, at any moment. But on returning to my office, I prepared the following letter and forwarded it to the company:

Scottdale, Pa., July 26, 1902.

Penn Coke Co., Successors to Painter & Fogg, Greensburg, Pa.

Dear Sirs: Upon visiting your Claire mine on July 24th, I discovered that you were operating said mine without the employment of a certificated mine foreman, as required by Article six, Section one, of the Bituminous Mine Act of 1893. Also that you have not provided any means of ventilation as required by Article four, Section one of said Act, and that the ventilation of said mine is inadequate in almost all portions of the same. Also that you are opening rooms in

the third right level or heading in advance of the air current, which is in violation of Article six, Section three, of said Act. Therefore I request that you take such action as will put the condition of your mine in compliance with the requirements of said Act. First, by employing a certificated mine foreman, and stopping all rooms that are being opened in advance of the air currents. Second, by providing some mechanical means of ventilation. I shall again visit your mine in the near future, and I hope that I shall find the conditions more favorable; if not, my official position demands that I take such action as will accomplish that end.

Very respectfully yours,

W. J. MOLLISON,
Mine Inspector.

August 26, I again visited said mine and discovered the same conditions existing. I had the employes withdrawn from all parts of the mine where the requirements of the law were not complied with, and upon the following date August 27, at Greensburg, Pa., I entered legal proceedings against the Penn Coke Co., Painter & Fogg, as operators and superintendents.

Charges as follows: For violation of Article six, Section one, also Article four, Section one, also Article six, Section three, Bituminous Mine Act, 1893.

A short time after a fan was placed at the mine, a mine foreman employed, and operations were resumed in full, and upon my next inspection the conditions were perfectly satisfactory.

November 6, I received from John E. Kunkle, my attorney in the proceedings, a letter setting forth the facts that Painter & Fogg, through their attorneys, had informed him that they, Painter & Fogg, had sold out their interests in the said Penn Coke Co., and were now out of the business, and were desirous to have the case non-prossed.

I forwarded the following reply:

Scottdale, Pa., Nov. 8, 1902.

Messrs. Robbins & Kunkle,
Greensburg, Pa.

Dear Sirs: Yours of the 6th inst. at hand and contents noted, and in reply I will state, that in view of the fact that Painter & Fogg have sold out their interests in the Clare & Hester mines, and have ceased the management of the same, that I will agree to have the proceedings against them non-prossed. Providing that they shall agree to pay all costs in connection with the case, including all fees paid

and due you, providing that the same shall be satisfactory to you. If this proposition is not acceptable, then the case must go to trial. Please communicate the result of the above as early as possible.

Very truly yours,

W. J. MOLLISON,
Mine Inspector.

November 12, I received a reply stating that the proposition had been accepted, all costs paid by the defendants, and the case nolle prossed.

Mutual No. 2.—Drift opening. Ventilation fair and drainage satisfactory. This mine is retreating with main pillars and is almost exhausted.

Mutual No. 3.—Drift opening. Ventilation fair and drainage satisfactory.

Humphrey.—Drift opening. Ventilation and drainage fair. The mine fire which developed in this mine in the year 1900, a description of which was given in the annual report of Inspector Ross of that year, has not developed any serious results during the past year, and prevailing opinion was that the same was entirely extinguished, having been closed up air-tight for a period of almost two years, but a spell of wet weather during the year has dispelled that hope, for it was discovered that when the water reached a higher point than usual, that it was discharged from the workings at an exceedingly high temperature demonstrating the fact that fire still existed, above the ordinary level of the water, but gives no indication of any danger to the mine.

Maguerite No. 1.—Drift opening. Ventilation fair and drainage satisfactory. Retreating with main pillars, and but a small portion of solid coal to be removed; will probably be exhausted during the coming year.

Marguerite No. 2.—Slope opening. The ventilation was somewhat defective in some portions of the mine during the early part of the year, but on my last inspection, the ventilating and drainage were perfectly satisfactory. The condition of the mine was greatly improved during the year, as relates to ventilation, drainage and haulage. A new underground pump house, and two substantial overcasts, were among the improvements installed.

Bowman.—Drift opening. The ventilation has always been found satisfactory, until my last inspection December 24, when there was an unusually large number of persons employed, and the greater number of them were located on the dip side, and there being no mechanical means of ventilation, it was in very unsatisfactory condition. So on December 30, I prepared the following letter and forwarded to the company:

Scottdale, Pa., December 30, 1902.

Bowman Coal Co., Bowman Mine.

Mr. S. M. Bowman, Supt., McKeesport, Pa.:

Dear Sir: Upon making an inspection of your Bowman mine on December 24, 1902, I observed that the ventilation in some portions of the same is inadequate, and in all other portions it is very irregular, therefore I request that you comply with the Bituminous Mine Act of 1893, Article two, which reads as follows: "And all mines where more than ten men are employed shall be provided with a fan, furnace or other artificial means to produce ventilation." Hoping that you will comply with the above as early as possible, I am

Yours very respectfully,

W. J. MOLLISON,
Mine Inspector.

As the above mine was transferred on January 1, 1903, from this into the Fourteenth district, my power for any further action ceases.

Annual Examination for Mine Foreman and Fire Boss Certificates.

The examination was held in Scottdale, January 21st, 22d and 23d, by the Board of Examiners, W. J. Mollison, Mine Inspector, John Stevenson, Superintendent; James H. Absalom, Mine Foreman.

Thirty-five applicants presented themselves for examination, namely, ten for mine foreman and twenty five for fire boss, of which number three were successful and received certificates as follows:

Mine Foreman, First Grade.

Wm. Gray, Mt. Pleasant; Allen S. Snyder, Summit Mines; A. S. Price, Mt. Pleasant; Andrew Laing, Summit Mines; Archibald Snedden, Tarr.

Fire Boss.

Wm. Davis, Suterville; George McPhail, United; Joseph Svirke, Mammoth; James A. Baldwin, Mt. Pleasant; Charles H. Nedley, Dawson; John McCarthy, Mt. Pleasant; Frank Rehanek, Mt. Pleasant; Alexander B. Gray, Cabinet; Charles Tahaney, Fitzhenry, and Allen S. Snyder, Summit Mines.

TABLE I—Showing names of operators, railroads, etc., and location of collieries in the Eleventh Bituminous District for the year 1902.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
H. C. Frick Coke Co.						
Alverton No. 1.	Westmoreland.	O. W. Kenedy.	Scottdale.	D. R. Deprist.	Alverton.	S. W. P. P. R.
Alverton No. 2.	Westmoreland.	O. W. Kenedy.	Scottdale.	D. R. Deprist.	Alverton.	S. W. P. P. R.
Bessemer Nos. 1 and 2.	Westmoreland.	O. W. Kenedy.	Scottdale.	James Devlin.	Mt. Pleasant.	Scottdale Br. P. R. R.
Buckeye.	Westmoreland.	O. W. Kenedy.	Scottdale.	J. M. Whittaw.	Stauffer.	Scottdale Br. P. R. R.
Calumet.	Westmoreland.	O. W. Kenedy.	Scottdale.	John Stevenson.	Mannoth.	Sewickley Br. P. R. R.
Central.	Westmoreland.	O. W. Kenedy.	Scottdale.	A. H. Pollins.	Ferce.	South West Br. P. R. R.
Diamond.	Westmoreland.	O. W. Kenedy.	Scottdale.	R. M. Cook.	Scottdale.	Mt. Pleasant Br. B. & O. R. R.
Enterprise.	Westmoreland.	O. W. Kenedy.	Scottdale.	Andrew Neish.	Alverton.	South West Br. P. R. R.
Jintown and Sterling No. 2.	Fayette.	O. W. Kenedy.	Scottdale.	J. F. Pickard.	Dawson.	B. & O. R. R.
Mannoth shaft.	Westmoreland.	O. W. Kenedy.	Scottdale.	John Stevenson.	Mannoth.	Sewickley Br. P. R. R.
Mannoth slope.	Westmoreland.	O. W. Kenedy.	Scottdale.	John Stevenson.	Mannoth.	Sewickley Br. P. R. R.
Mutual No. 1.	Westmoreland.	O. W. Kenedy.	Scottdale.	J. M. Whittaw.	Stauffer.	Mt. Pleasant Br. B. & O. R. R.
Mutual No. 2.	Westmoreland.	O. W. Kenedy.	Scottdale.	J. M. Whittaw.	Stauffer.	Sewickley Br. P. R. R.
Mutual No. 3.	Westmoreland.	O. W. Kenedy.	Scottdale.	Robt. Ramsey.	United.	Sewickley Br. P. R. R.
Mutual No. 4.	Westmoreland.	O. W. Kenedy.	Scottdale.	Robt. Ramsey.	United.	Sewickley Br. P. R. R.
Painter.	Fayette.	O. W. Kenedy.	Scottdale.	Robt. Ramsey.	United.	Sewickley Br. P. R. R.
Rising Sun.	Westmoreland.	O. W. Kenedy.	Scottdale.	R. M. Cook.	Scottdale.	Mt. Pleasant Br. B. & O. R. R.
Ruff.	Westmoreland.	O. W. Kenedy.	Scottdale.	W. C. Mullin.	Broad Ford.	Mt. Pleasant Br. P. R. R.
Standard shaft.	Westmoreland.	O. W. Kenedy.	Scottdale.	James Devlin.	Ferce.	South West Br. P. R. R.
Standard slope.	Westmoreland.	O. W. Kenedy.	Scottdale.	J. S. Mack.	Mt. Pleasant.	South West Br. P. R. R.
Sterling No. 1.	Fayette.	O. W. Kenedy.	Scottdale.	J. S. Mack.	Mt. Pleasant.	South West Br. P. R. R.
Summit.	Fayette.	O. W. Kenedy.	Scottdale.	Jas. A. Childs.	Adelaide.	B. & O. R. R.
Tip Top.	Fayette.	O. W. Kenedy.	Scottdale.	W. C. Mullin.	Broad Ford.	F. & O. R. R.
United.	Westmoreland.	O. W. Kenedy.	Scottdale.	James Lynch.	Everson.	Mt. Pleasant Br. P. & O. R. R.
Vandy.	Fayette.	O. W. Kenedy.	Scottdale.	Robt. Ramsey.	United.	Sewickley Br. P. R. R.
White.	Fayette.	O. W. Kenedy.	Scottdale.	James Lynch.	Everson.	Mt. Pleasant Br. B. & O. R. R.
Pittsburgh Coal Co.						
Big Chief.	Westmoreland.	G. W. Schluederberg.	Pittsburg.	W. A. Calverly.	Scotthaven.	B. & O. R. R.
Eureka.	Westmoreland.	G. W. Schluederberg.	Pittsburg.	J. K. McDonald.	Smithton.	F. & O. R. R.
Eucled.	Westmoreland.	G. W. Schluederberg.	Pittsburg.	A. W. Calverly.	Fitzhenry.	F. & O. R. R.
Guffey.	Westmoreland.	G. W. Schluederberg.	Pittsburg.	W. A. Calverly.	Scotthaven.	F. & O. R. R.
Ocean No. 1.	Westmoreland.	G. W. Schluederberg.	Pittsburg.	W. A. Calverly.	Fitzhenry.	F. & O. R. R.
Port Royal No. 1.	Westmoreland.	G. W. Schluederberg.	Pittsburg.	A. W. Swaney.	Fitzhenry.	F. & O. R. R.
Port Royal No. 2.	Westmoreland.	G. W. Schluederberg.	Pittsburg.	W. A. Calverly.	Scotthaven.	F. & O. R. R.
Shaner slope.	Westmoreland.	G. W. Schluederberg.	Pittsburg.	W. A. Calverly.	Scotthaven.	F. & O. R. R.
Waverly.	Westmoreland.	G. W. Schluederberg.	Pittsburg.	J. K. McDonald.	Smithton.	F. & O. R. R.
Yough slope.	Westmoreland.	G. W. Schluederberg.	Pittsburg.	F. M. Fritchman.	West Newton.	F. & O. R. R.

South West Connellsville

South West No. 1, A.	Westmoreland,	W. O. Kennedy,	Scottdale,	W. S. Ramsey, ...	Mt. Pleasant,	Scottdale Br. P. R. R.
South West No. 1, B.	Westmoreland,	W. O. Kennedy,	Scottdale,	W. S. Ramsey, ...	Mt. Pleasant,	Scottdale Br. P. R. R.
South West No. 2,	Westmoreland,	W. O. Kennedy,	Scottdale,	Jno. Q. Finch, ...	Mt. Pleasant,	Scottdale Br. P. R. R.
South West No. 3,	Westmoreland,	W. O. Kennedy,	Scottdale,	E. S. Wolfers- ...	Tarr,	South West P. R. R.
South West No. 4,	Westmoreland,	W. O. Kennedy,	Scottdale,	E. S. Wolfers- ...	Alverton,	South West P. R. R.
Hecla Coke Co.						
Hecla No. 1,	Westmoreland,	Thomas Laird,	South West,	Thomas Laird, ...	South West,	South West P. R. R.
Hecla No. 2,	Westmoreland,	Thomas Laird,	South West,	Thomas Laird, ...	South West,	South West P. R. R.
Hecla No. 3,	Westmoreland,	Thomas Laird,	South West,	Thomas Laird, ...	South West,	South West P. R. R.
Continental Coke Co.						
Marguerite No. 1,	Westmoreland,	O. W. Kennedy,	Scottdale,	C. E. Jones,	Pleasant Unity, ...	South West P. R. R.
Marguerite No. 2,	Westmoreland,	O. W. Kennedy,	Scottdale,	C. E. Jones,	Pleasant Unity, ...	South West P. R. R.
Penn Gas Coal Co.						
Aval Hill,	Westmoreland,	T. Frank Wolf,	Irw. B.	E. V. Williams, ...	Irw. B.	E. & O. R. R.
Penn Gas No. 1,	Westmoreland,	T. Frank Wolf,	Irw. B.	E. V. Williams, ...	Irw. B.	Yonahloskey Br. P. R. R.
Penn Gas No. 2,	Westmoreland,	T. Frank Wolf,	Irw. B.	E. V. Williams, ...	Irw. B.	E. & O. R. R.
W. J. Railway						
Adams,	Westmoreland,	T. J. Mitchell,	Connellsville, ...	Hugh Ross,	Mt. Pleasant, ...	S. W. P. R. R.
Union,	Westmoreland,	T. J. Mitchell,	Connellsville, ...	Wm. Lounsbury, ...	Alverton,	S. W. P. R. R.
Bassett Coke Co.						
Bassett,	Westmoreland,	R. L. Martin,	Pittsburg,	S. Billheimer, ...	Pittsburg,	W. P. R. R.
Hampton,	Westmoreland,	R. L. Martin,	Pittsburg,	C. M. Lowman, ...	Hampton,	W. P. R. R.
Chas. Hecla						
Chas. Hecla No. 1,	Westmoreland,	M. L. Phillips,	Greentown,	C. F. Amos,	Woods,	W. P. R. R.
Chas. Hecla No. 2,	Westmoreland,	M. L. Phillips,	Greentown,	C. F. Amos,	Woods,	W. P. R. R.
Mt. Pleasant Coke Co.						
Bassett,	Westmoreland,	W. A. Wynn,	Greentown,	Jas. Seeburg, ...	South West, ...	W. P. R. R.
Acropolis Yonahloskey Co.						
Acropolis,	Westmoreland,	R. E. Maitland, ...	Pittsburg,	Jas. Hardy,	Acropolis,	H. & O. R. R.
Yonahloskey,	Westmoreland,	W. A. Wynn,	Greentown,	M. C. Smith,	South West, ...	S. W. P. R. R.
Bassett Coal and Coke Co.						
Hampton,	Westmoreland,	F. E. Maitland, ...	Greentown,	H. H. Smith,	Hampton,	S. W. P. R. R.
Continental Coke Co.						
Hampton,	Westmoreland,	F. E. Maitland, ...	Greentown,	L. E. Smith,	Hampton,	S. W. P. R. R.
South West						
South West No. 1,	Westmoreland,	H. J. Smith,	Greentown,	W. P. Smith,	Hampton,	H. & O. R. R.

TABLE I—Continued.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
B. F. Keister & Co. Franklin,	Fayette,.....	B. F. Keister,	Scottdale,	B. F. Keister, ..	Scottdale,	Mt. Pleasant Br. B. & O. R. R.
American Sheet Steel Co. Scottdale,	Fayette,.....	Robert Skemp,	Scottdale,	H. J. Suttle,	Everson,	Mt. Pleasant Br. B. & O. R. R.
J. R. Stauffer & Co. Dexter,	Fayette,.....	J. R. Stauffer,	Scottdale,	S. R. Fairchild,...	Scottdale,	Mt. Pleasant Br. B. & O. R. R.
J. W. Overholt & Co. Emma,	Westmoreland,...	J. W. Overholt,	Scottdale,	J. W. Overholt,...	Scottdale,	S. W. P. R. R.
J. W. Shields. Osceola,	Allegheny,.....	J. W. Shields,	Pittsburg,	H. C. Jones,	Emblem,	B. & O. R. R.
Bowman Bros. Bowman,	Allegheny,.....	S. M. Bowman,	McKeesport, ..	S. M. Bowman,...	McKeesport,	Second Ave. Traction R. R.

TABLE II.—Continued.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number and heat at colliery.	Sold to local trade and used by employes—tons.	Total production of coke in tons.	Total production of coke in tons.	Number of coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Valley,	Fayette,	31,124	1,737	1,470	297,410	111,000	251	281	229	1	1	2,400	250	25
White,	Fayette,	382	382	2,722	144,331	94,000	200	285	163	...	...	1,015	100	33
Totals and averages, .....	.....	181,176	68,114	38,573	3,941,635	2,400,516	3,382	274	5,221	13	26	11,658	17,525	688
Pittsburg Coal Co.														
Big Chief,	Westmoreland,	55,346	217	169	95,752	.....	.....	196.7	101	.....	.....	588	450	6
Burska,	Westmoreland,	110,313	2,350	79	112,732	.....	.....	225	158	1	4	490	450	16
Euclid,	Westmoreland,	90,792	2,021	330	164,751	8,453	56	187.5	122	1	3	555	200	8
Garfield,	Westmoreland,	166,635	.....	.....	166,635	.....	.....	186	110	.....	.....	372	.....	7
Joan No. 1,	Westmoreland,	157,163	8,151	992	146,249	.....	.....	214.5	133	2	1	508	200	16
Port Royal No. 1,	Westmoreland,	11,764	3,146	618	37,868	56,553	61	273	41	.....	.....	250	.....	4
Port Royal No. 2,	Westmoreland,	23,723	2,253	312	46,770	.....	.....	160.8	138	.....	.....	400	.....	7
Porter slope,	Westmoreland,	8,067	2,649	1,047	113,930	18,188	61	219	143	.....	5	390	100	16
Scraper,	Westmoreland,	84,056	2,649	.....	117,575	.....	.....	209.5	131	.....	.....	450	256	14
Young slope,	Westmoreland,	165,949	2,526	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals and averages, .....	.....	887,762	25,866	3,487	1,006,455	52,574	147	217.7	1,101	3	17	4,527	1,500	94
South West Connellsville Coke Co.														
South West No. 1, A,	Westmoreland, .....	.....	10,158	5,535	235,318	293,373	425	297	484	1	.....	.....	.....	37
South West No. 1, B,	Westmoreland, .....	.....	5,079	2,768	168,159	106,667	200	297	239	1	.....	.....	.....	18
South West No. 2,	Westmoreland, .....	.....	2,171	3,220	299,713	176,000	252	296	297	4	1	.....	3,100	40
South West No. 3,	Westmoreland, .....	.....	4,255	26,934	196,285	163,000	265	289	243	.....	1	.....	500	23
South West No. 4,	Westmoreland, .....	.....	571	1,926	139,530	78,000	151	300	163	.....	.....	.....	80	18
Totals and averages, .....	.....	.....	22,214	50,383	1,030,065	617,000	1,233	297.8	1,377	6	4	.....	3,880	133

Totals in this column are averages.

Hecla Coke.									
Hecla No. 1.	Westmoreland.	5,788	2,819	288,366	167,160	272	287	259	39
Hecla No. 2.	Westmoreland.	6,492	4,068	412,182	301,373	509	578	499	72
Hecla No. 3.	Westmoreland.							40	
Totals and averages.		12,280	6,887	640,548	468,533	772	287.3	798	111
Continental Coke Co.									
Marguerite No. 1.	Westmoreland.	938		57,712	37,658	80	993	89	10
Marguerite No. 2.	Westmoreland.		4,617	229,847	148,332	329	243	230	41
Totals and averages.		938	4,617	288,559	186,090	409	286	310	54
Penn Gas Coal Co.									
Ayers Hollow.	Westmoreland.	84,125	355	85,482			237	90	12
Penn Gas No. 3.	Westmoreland.	5,230	2,362	7,770		50	31	50	11
Penn Gas No. 4.	Westmoreland.	84,113	1,014	85,482			237	193	13
Totals and averages.		173,656	2,390	178,734		50	236.1	370	36
W. J. Ratney.									
Acme.	Westmoreland.		628	154,370	101,140	200	306	194	10
Union.	Westmoreland.		292	29,990	19,549	70	313	54	8
Totals and averages.			2,422	184,360	120,689	270	309.5	248	18
Blossmer Coke Co.									
Empire.	Westmoreland.	2,400	100	86,460	68,164	130	288	162	32
Hempire.	Westmoreland.		500	78,926	56,291	140	284	150	18
Totals and averages.		5,000	1,000	165,386	124,455	270	286	212	30
Clare.									
Hamlet.	Westmoreland.	1,000	125	78,963	48,140	20	205	50	6
Totals and averages.		1,000	125	78,963	48,140	20	205	50	6

Should be with figures are averages
 Since—400 double columns reported by comparison of materials will be found in the population

Report in 1900

Hecla No. 1.	Westmoreland.	5,788	2,819	288,366	167,160	272	287	259	39
Hecla No. 2.	Westmoreland.	6,492	4,068	412,182	301,373	509	578	499	72
Hecla No. 3.	Westmoreland.							40	
Totals and averages.		12,280	6,887	640,548	468,533	772	287.3	798	111
Continental Coke Co.									
Marguerite No. 1.	Westmoreland.	938		57,712	37,658	80	993	89	10
Marguerite No. 2.	Westmoreland.		4,617	229,847	148,332	329	243	230	41
Totals and averages.		938	4,617	288,559	186,090	409	286	310	54
Penn Gas Coal Co.									
Ayers Hollow.	Westmoreland.	84,125	355	85,482			237	90	12
Penn Gas No. 3.	Westmoreland.	5,230	2,362	7,770		50	31	50	11
Penn Gas No. 4.	Westmoreland.	84,113	1,014	85,482			237	193	13
Totals and averages.		173,656	2,390	178,734		50	236.1	370	36
W. J. Ratney.									
Acme.	Westmoreland.		628	154,370	101,140	200	306	194	10
Union.	Westmoreland.		292	29,990	19,549	70	313	54	8
Totals and averages.			2,422	184,360	120,689	270	309.5	248	18
Blossmer Coke Co.									
Empire.	Westmoreland.	2,400	100	86,460	68,164	130	288	162	32
Hempire.	Westmoreland.		500	78,926	56,291	140	284	150	18
Totals and averages.		5,000	1,000	165,386	124,455	270	286	212	30
Clare.									
Hamlet.	Westmoreland.	1,000	125	78,963	48,140	20	205	50	6
Totals and averages.		1,000	125	78,963	48,140	20	205	50	6

TABLE II—Continued.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coke in tons.	Total production of coke in tons.	Number of coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
W. J. Ratney.	Westmoreland.	.....	2,022	1,042	184,700	139,689	270	306.5	248	.....	3	24	210	18
Bessmer Coke Co.,	Westmoreland.	3,900	1,825	690	165,295	121,365	220	286	312	.....	4	.....	.....	50
Penn. Coke Co.,	Westmoreland.	3,587	1,269	345	57,411	35,490	150	266	113	.....	.....	.....	.....	10
Mt. Pleasant Coke Co.,	Westmoreland.	.....	400	480	133,249	83,240	124	253	138	.....	3	.....	.....	14
Veteran Coke Co.,	Westmoreland.	.....	85	65	8,738	5,316	64	79	.....	.....	.....	.....	.....	5
Amyville-Youghiogheny G. C. Co.,	Westmoreland.	22,843	600	.....	21,442	.....	.....	256	96	.....	.....	.....	.....	10
Keystone Coal and Coke Co.,	Westmoreland.	1,749	.....	.....	1,748	.....	.....	153	14	.....	.....	.....	350	4
Conesville Coke Co.,	Fayette.	.....	1,736	684	59,118	43,351	92	272	80	.....	.....	203	.....	4
Lucas Bros.,	Fayette.	.....	183	254	42,473	28,025	50	284	50	.....	.....	125	.....	4
B. Keiser & Co.,	Fayette.	18,000	65	225	54,815	21,833	50	309	41	.....	.....	75	.....	4
American Steel Co.,	Fayette.	.....	.....	.....	26,540	.....	.....	295	28	.....	1	.....	.....	8
W. R. Sherff & Co.,	Fayette.	.....	.....	179	24,138	19,166	40	284	27	.....	.....	.....	.....	3
J. W. Overholt & Co.,	Westmoreland.	.....	.....	192	1,359	1,325	36	23	15	.....	.....	.....	75	9
J. W. Shields,	Allegheny.	166,835	2,439	.....	169,298	.....	.....	271	230	1	3	1,000	.....	11
Bowman Bros.,	Allegheny.	.....	.....	17,705	17,705	.....	.....	311	18	.....	.....	.....	.....	2
Grand totals and averages.	.....	1,462,158	145,967	136,501	8,057,123	4,255,707	9,026	280.5	10,731	30	79	17,641	25,540	1,205

TABLE II—Continued.

Names of Operators.	County.		Number of Boilers.		Total horse power.		Locomotives.		Number steam engines of all classes.	Total horse power.	Number pumps delivering water to surface.	Capacity in Gallons per minute.	Quantity delivered to surface per minute—Gallons.	Number electric dynamos.	Number air compressors.
	Cylindrical.	Horse power.	Tubular.	Horse power.	Steam.	Air.	Electric.								
H. C. Frick Coke Co.,	60	2,160	49	5,080	7,240	22	2	5	71	4,560	35	17,376	10,258	1	2
Pittsburgh Coal Co.,	3	140	26	2,270	2,410	6	1	1	15	1,076	10	1,076	1,076	1	1
South West Connellsville Coke Co.,	6	260	21	1,734	2,034	1	1	1	15	1,734	1	1,734	1,734	1	1
Hedra Coke Co.,	4	190	11	1,280	1,470	1	1	1	15	1,280	1	1,280	1,280	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Centennial Coke Co.,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	100	1	100	100	1	1
Westmoreland,	1	40	1	100	140	1	1	1	1	1					

TABLE III—Continued.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.							Grand total, inside and outside.			
		Mine foremen.	Assistant mine foremen.	Fire bosses.	Miners.	Machine runners.	Machine loaders.	Machine scrapers.	Drivers and runners.	Door boys and helpers.	Company men.	All other employees.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	Coke employees.		Book-keepers and clerks.	All other employees.	Total outside.
Bessemer Coke Co.	Westmoreland.	1	1	1	60	1	1	1	7	2	3	9	82	1	1	1	2	74	1	1	80	162
Empire,	Westmoreland.	1	1	1	55	1	1	1	5	1	9	1	70	1	2	4	3	70	1	1	80	150
Humphrey,	Westmoreland.	2	1	1	115	1	1	1	12	2	12	9	152	2	3	5	5	144	1	1	160	312
Totals,																						
Penn Coke Co.	Westmoreland.	1	1	1	21	1	1	1	3	1	1	4	29	1	1	1	1	15	1	1	8	27
Clare,	Westmoreland.	1	1	1	22	1	1	1	4	1	1	3	30	1	1	1	2	14	1	1	8	27
Hester,	Westmoreland.	2	1	1	43	1	1	1	7	1	1	7	59	2	2	2	3	29	2	16	54	113
Totals,																						

Note.—All single mines operated by companies or individuals will be found in the Recapitulation.

Recapitulation.

H. C. Frick Coke Co.,	26	2	22	2,287	279	51	176	171	3,014	22	29	71	80	1,644	26	336	2,297	5,281
Pittsburg Coal Co.,	2	1	8	198	31	22	16	68	971	4	5	21	32	55	8	95	220	1,191
S. W. Coal Co.,	2	1	6	354	52	13	40	23	760	4	7	11	25	471	7	34	617	1,377
Hedra. Coke Co.,	2	1	4	354	52	13	27	16	252	1	2	13	26	240	5	30	316	738
Continental Coke Co.,	2	1	1	173	23	6	19	12	213	1	2	7	6	35	4	52	167	410

Penn Gas Coal Co.,	2	2	1	4	113	8	50	8	23	6	55	270	1	2	2	6	14	99	64	90	369
W. J. Bessmer,	2	2	1	1	107	11	11	133	1	2	4	1	115	248
Bessmer Coke Co.,	2	2	1	1	115	.....	.....	.....	12	2	12	9	152	2	3	.....	.....	144	9	169	372
Penn Coke Co.,	2	2	.....	.....	43	.....	.....	.....	7	.....	.....	.....	7	.....	.....	.....	.....	3	2	54	113
Mt. Pleasant Coke Co.,	1	.....	.....	58	.....	.....	.....	.....	2	2	2	.....	71	1	1	.....	.....	58	1	67	138
Veteran Coke Co.,	1	.....	.....	25	.....	.....	.....	.....	4	.....	1	.....	31	1	.....	.....	.....	28	1	33	64
Amyville-Youghiogheny Gas Coal Co.,	1	75	8	2	86	1	1	2	3	10	96
Keystone Coal and Coke Co.,	1	9	2	12	1	1	2	14
Pennsylvania Coke Co.,	1	.....	.....	32	.....	.....	.....	.....	3	.....	7	.....	43	1	1	.....	.....	30	1	37	80
Cochran Bros.,	1	.....	.....	21	.....	.....	.....	.....	3	.....	4	.....	23	1	1	.....	.....	15	1	21	50
B. F. Kalster & Co.,	1	19	3	1	24	1	1	10	5	17	41
American Sheet Steel Co.,	1	18	2	2	25	1	2	3	28
J. R. Stauffer & Co.,	1	13	2	13	1	17	9	10	27	57
J. W. Stauffer & Co.,	1	.....	.....	5	.....	.....	.....	.....	1	.....	7	.....	7	1	1	.....	.....	3	1	8	15
J. W. Shields,	1	1	2	44	9	111	9	12	2	2	7	1	199	1	4	5	.....	4	17	31	220
Bowman Bros.,	1	.....	.....	11	.....	.....	.....	.....	2	.....	.....	.....	14	1	1	.....	.....	.....	2	4	18
Grand totals,	65	8	49	4,329	54	647	52	618	121	398	310	6,642	48	64	151	203	2,930	72	721	4,189	10,831	

TABLE III—Continued.

Names of Operators and Collieries.	Number of Days Worked in Each Month.												Total.
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
H. C. Frick Coke Co.,	21.3	19	20.8	21.5	24.7	24.1	27	26	25.7	25	19.9	19	274
Pittsburgh Coal Co.,	17.3	14.7	15.7	18.9	18.2	20.6	17	17.2	17.4	23.6	17.8	19.3	217.7
South West Connellsville Coke Co.,	26.4	20.6	25.6	24.6	26.6	25	27	26	26	27	22	20.8	297.8
Hoeda Coke Co.,	21.5	18	20.5	21.5	23.5	25	26	25	26	26.7	21.6	26	287.3
Continental Coke Co.,	23	13	17	22	27.5	22	22	26	26	27	18	20	233
Wyand Gas Coal Co.,	23.5	14	22	22	25.5	22.5	22	26	26	18.5	14.4	18.7	236.1
W. J. Rainey,	22.5	14.5	22	22	26.5	26.5	24	26	26	27	23.5	25	283.5
Beaman Coal Co.,	23	20	20.5	22	26.5	26.5	24	26	26	27	23	25	288
Donn Coke Co.,	23	20	23	22	27	26	25	27	26	27	22	21	285
Mt. Pleasant Coke Co.,	27	22	26	26	27	25	23	9	13	23	22	21	279
Ameyville-Youghiogheny Gas Coal Co.,	20	19	20	21	23	25	25	26	26	24	23	24	256
Keweenaw Coal and Coke Co.,	22	20	22	23	25	25	26	26	26	25	23	23	253
Pennsylvania Coke Co.,	27	24	26	26	26	26	26	25	26	25	23	24	272
E. F. Koister & Co.,	26	23	26	25	26	25	26	25	26	27	24	26	284
American Sheet Steel Co.,	21	20	21	20	25	24	27	26	26	27	24	26	300
J. R. Stauffer & Co.,	23	20	21	20	25	24	27	26	26	27	24	26	295
J. W. Overholt & Co.,	4	20	25	25	26	24	26	26	26	27	24	23	284
T. W. Shields,	27	15	26	26	27	25	26	26	26	27	20	23	271
Bowman Bros.,	27	15	26	26	27	25	26	26	26	27	25	25	311
Averages,	22.3	20	22.6	23.1	25.3	24.6	21.6	23.9	23.2	25.4	22.1	22.4	280.5

TABLE IV.—List of fatal accidents that occurred in and about the mines of the Eleventh Bituminous district for the year ending December 31, 1902.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan.	17 Port Nix.	American.	Miner.	15	S.			Ocean No. 1.	Westmoreland.	Killed instantly by falling slate.
	27 George Fischer.	Hungarian.	Miner.	26	S.			Central.	Westmoreland.	Killed instantly by a fall of roof.
Feb.	17 George Guretski.	Austrian.	Miner.	39	M.	1	4	South West No. 2.	Westmoreland.	Killed instantly by a fall of roof and slate.
	24 George Pensook.	Austrian.	Miner.	59	M.	1	1	Alverton No. 2.	Westmoreland.	Killed instantly by a fall of coal and slate.
Mar.	4 Samuel Slawinski.	Slav.	Miner.	25	S.			Standard shaft.	Westmoreland.	Killed instantly by falling from cage and down shaft.
	4 Andrew Shultz.	Polish.	Miner.	46	M.	1	6	Standard shaft.	Westmoreland.	Fatally injured by fall of slate.
	4 Moses Vaiden.	Slav.	Miner.	48	M.	1	3	Standard shaft.	Westmoreland.	Killed instantly by a fall of roof.
	11 Lee Hagden.	American.	Miner.	38	M.	1	3	Hecla No. 2.	Allegheny.	Fatally injured by fall of slate.
	8 Andrew Stankislov.	Slav.	Miner.	28	M.	1	7	South West No. 1, A.	Westmoreland.	Killed instantly by a fall of roof.
April	2 Fred Har.	German.	Miner.	18	M.	1	5	South West No. 1, B.	Westmoreland.	Fatally injured by mine cars.
	18 Michael Solank.	Slav.	Miner.	31	M.	1	5	Eureka.	Westmoreland.	Fatally injured by fall of slate.
	27 Michael Hartzel.	Polish.	Miner.	26	M.	1	1	Marguerite No. 2.	Westmoreland.	Fatally injured by mine cars.
May	2 Michael Panchuk.	Slav.	Miner.	52	M.	1	3	Hecla No. 2.	Westmoreland.	Fatally injured by fall of coal and slate.
	21 John Rubens.	Slav.	Miner.	35	M.	1	3	Standard shaft.	Westmoreland.	Killed instantly by fall of coal and slate.
June	21 Alexander Ransow.	American.	Fireman.	22	M.	1	2	South West No. 2.	Westmoreland.	Fatally injured by mine cars.
	21 Thomas Dell.	Polish.	Miner.	22	S.			First.	Payette.	Killed almost instantly by a fall of roof.
July	22 Michael Yezko.	Slav.	Miner.	32	M.	1	1	Hecla No. 2.	Westmoreland.	Killed instantly by a fall of roof.
Aug	22 James Rybicki.	Polish.	Miner.	44	M.	1	1	Hecla No. 1.	Westmoreland.	Fatally injured by mine cars.
	27 Joseph Sawyrie.	Polish.	Miner.	31	M.	1	1	Hecla No. 2.	Westmoreland.	Fatally injured by fall of coal and slate.
	29 John Tregeye.	Hungarian.	Miner.	31	S.			First.	Payette.	Fatally injured by mine cars.
Sept	4 W. L. Kord.	American.	Fireman.	49	M.	1	5	Marguerite No. 2.	Payette.	Fatally injured by mine cars.
	13 Samuel Nichols.	American.	Fireman.	42	M.	1	1	Imperial.	Westmoreland.	Fatally injured by mine cars.
Oct	2 Andrew Williams.	American.	Miner.	27	S.			Imperial.	Payette.	Killed instantly by fall of coal and slate.
	10 James Jones.	American.	Miner.	39	M.	1	4	South West No. 2.	Westmoreland.	Killed almost instantly by fall of coal and slate.

TABLE IV—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Oct. 27	John Shober,	Slav,	Miner,	42	M.	1	3	Valley,	Fayette,	Killed instantly by a fall of roof.
Nov. 31	Charles Gratche,	Pole,	Driver,	17	S.	1	1	Bessemer No. 2,	Westmoreland, ..	Fatally injured by mine cars.
Nov. 4	Julias Denyon,	Austrian, ..	Miner,	20	S.	1	1	South West No. 2,	Westmoreland, ..	Killed instantly by fall of coal and slate.
Dec. 4	James Fullerton, ...	Scotch,	Co. man,	54	M.	1	1	Heda No. 2,	Westmoreland, ..	Killed instantly by fall of coal and slate.
Dec. 4	Stephen Budner,	Slav,	Miner,	47	M.	1	7	Bessemer No. 2,	Westmoreland, ..	Fatally injured by fall of coal and slate.

TABLE V.—List of non-fatal accidents that occurred in and about the mines of the Eleventh Bituminous district for the year ending December 31, 1902.

Date of accident.	Name of person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of County.	County.	Nature and Cause of Accident in Brief.
Jan.	3 Iracez Wateryan,	Pole,	Miner,	33 M.	Standard shaft,	Westmoreland,	Westmoreland,	Injured by fall of slate and a post.
	17 John Savaris,	Slav,	Driver,	38 S.	Maneuver No. 2,	Westmoreland,	Westmoreland,	Arm fractured by mine cars.
	23 John Milikan,	American,	Driver,	39 M.	Painter,	Payette,	Payette,	Leg fractured by mine cars.
	23 Calvin Emley,	American,	Tripple hand,	35 M.	Waverly,	Westmoreland,	Westmoreland,	Scull fractured by falling from coal tipple.
Feb.	25 George Eaglehook,	Austrian,	Miner,	37 M.	Calumet,	Westmoreland,	Westmoreland,	Leg injured by mine cars.
	3 James S. Smith,	Indian,	Miner,	35 S.	Mullin,	Westmoreland,	Westmoreland,	Leg and jaw fractured by mine cars.
	4 Carroll Gustafson,	Swede,	Miner,	35 S.	Penn Gas No. 4,	Westmoreland,	Westmoreland,	Hand lacerated by mine cars.
	17 Bert Swift,	American,	Tripp runner,	26 M.	Painter,	Payette,	Payette,	Injured by dinky locomotive and mine cars.
March	17 John Benda,	Austrian,	Miner,	23 M.	South West No. 2,	Westmoreland,	Westmoreland,	Injured by fall of coal and slate.
	23 Chauncey Brown,	American,	Driver,	29 S.	Hecla No. 2,	Westmoreland,	Westmoreland,	Thigh fractured by mine cars.
	37 William Leaver,	German,	Miner,	15 S.	Union,	Westmoreland,	Westmoreland,	Arm fractured by falling over mine cars.
	17 Roy Twacht,	American,	Tripple hand,	15 S.	Hecla No. 2,	Westmoreland,	Westmoreland,	Leg and arm lacerated by falling post.
April	17 William Bankhart,	American,	Miner,	36 M.	Penn Gas No. 4,	Westmoreland,	Westmoreland,	Leg fractured by mine cars.
	21 Bert Fry,	American,	Driver,	34 M.	Maneuver No. 2,	Westmoreland,	Westmoreland,	Post crushed by falling slate.
	3 Joseph Ercand,	Hungarian,	Miner,	39 S.	Morgantown No. 1,	Westmoreland,	Westmoreland,	Leg crushed by falling mine cars.
	4 Francis J. Patton, 2206,	Hallish,	Miner,	16 S.	Galloway,	Westmoreland,	Westmoreland,	Leg crushed, dislocating with falling mine cars.
May	5 Arthur Branting,	Hallish,	Driver,	24 M.	Alberton No. 1,	Westmoreland,	Westmoreland,	Thigh fractured and hand injured by fall of slate.
	5 Henry Schubert,	German,	March loader,	30 M.	Eureka,	Westmoreland,	Westmoreland,	Leg fractured by mine cars and hand.
	11 Isaac Gervard,	American,	Driver,	22 M.	Maneuver No. 3,	Westmoreland,	Westmoreland,	Thigh fractured by falling slate and hand.
	11 Frank Taylor,	German,	Miner,	22 M.	Hecla,	Westmoreland,	Westmoreland,	Leg fractured by mine cars.
June	18 Ignace Cernatshel,	Pole,	Tripple man,	27 S.	Maneuver No. 2,	Westmoreland,	Westmoreland,	Leg fractured by mine cars.
	18 James C. Smith,	American,	Miner,	24 S.	Standard shaft,	Westmoreland,	Westmoreland,	Leg fractured by mine cars.
	3 George Eaglehook,	Polish,	Driver,	37 M.	Maneuver No. 2,	Payette,	Payette,	Leg fractured by mine cars.
	11 William MacLean,	American,	Driver,	35 M.	Mullin,	Westmoreland,	Westmoreland,	Thigh lacerated by mine cars.
June	11 Stephen Finkelsch,	Polish,	Miner,	35 M.	Mullin,	Westmoreland,	Westmoreland,	Thigh lacerated by mine cars.
	11 Michael O'Connell,	Polish,	Driver,	24 M.	Maneuver No. 2,	Westmoreland,	Westmoreland,	Leg fractured by mine cars.
June	11 William Peters,	Polish,	Driver,	24 M.	Hecla,	Westmoreland,	Westmoreland,	Leg fractured by mine cars.

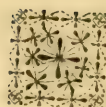
TABLE V—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
June 14	Michael Polak,	Slav,	Miner,	47	M.	Standard shaft,	Westmoreland, ...	Thigh fractured by fall of coal and slate.
14	Jack Fergish,	Slav,	Miner,	33	M.	Empire,	Westmoreland, ...	Thigh ribs fractured by mine cars.
14	David Campbell,	American, ..	Lamp boy, ...	14	S.	Marguerite No. 2, ..	Westmoreland, ...	Injured by explosion of empty naphtha barrel, outside.
17	C. W. Keffe,	American, ...	Miner,	30	S.	Rising Sun,	Westmoreland, ...	Leg fractured by fall of coal and slate.
17	Jesse Reynolds,	American, ...	Extra driver, ...	19	S.	Empire,	Westmoreland, ...	Hip fractured by mine cars.
22	Joseph Roeder,	Slav,	Driver,	26	M.	Marguerite No. 2, ..	Westmoreland, ...	Arm fractured by falling.
23	John Marchick,	French,	Mach. loader, ..	40	M.	Guffey,	Westmoreland, ...	Compound fracture of leg by fall of coal.
23	Michael Toblat,	Slav,	Driver,	21	S.	Guffey,	Westmoreland, ...	Ankle bruised by mine cars.
23	John Smith,	Pole,	Miner,	45	M.	Painter,	Fayette,	Injured by fall of coal and slate.
23	John Otas,	Slav,	Miner,	45	M.	Hecla No. 1,	Westmoreland, ...	Leg fractured by fall of slate.
15	Valentine Bladnick,	German,	Mach. loader, ...	47	M.	Guffey,	Westmoreland, ...	Scalp wound by fall of slate.
18	John Genshifstni,	American, ...	Driver,	38	M.	Ocean No. 1,	Westmoreland, ...	Leg sprained by fall of coal.
30	James Coughanour,	American, ...	Miner,	33	M.	Calumet,	Westmoreland, ...	Leg bruised by mine cars.
30	Michael Hodoek,	Slav,	Driver,	23	M.	Ruff,	Westmoreland, ...	Burned by a blast of powder.
6	George Viable,	Slav,	Company man, ..	30	M.	Acme,	Westmoreland, ...	Ribs fractured by mine cars.
Aug. 8	Charles Koleskle,	Hungarian, ...	Miner,	33	M.	Marguerite No. 2, ..	Westmoreland, ...	Head bruised by fall of slate.
12	Joseph Hondvose,	Austrian, ...	Miner,	32	M.	Euché,	Westmoreland, ...	Head and shoulder bruised by fall of slate.
14	Chauncey Frown,	Welsh,	Driver,	19	S.	Hecla No. 2,	Westmoreland, ...	Thigh fractured by falling while running after a horse.
16	John Persinkey,	Pole,	Miner,	24	S.	Standard slope,	Westmoreland, ...	Ribs fractured and finger crushed by mine cars.
20	Mathew Ceplicha,	Bohemian, ...	Miner,	51	S.	Standard shaft,	Westmoreland, ...	Leg fractured by fall of roof coal and slate.
25	Harry Pritchett,	American, ...	Driver,	50	S.	Waverly,	Westmoreland, ...	Contusion of foot by mine cars.
1	John Kolaski,	Pole,	Miner,	23	S.	Acme,	Westmoreland, ...	Body bruised and back lacerated by fall of coal and slate.
4	Michael Olrahal,	English, ...	Driver,	30	M.	Penn Gas No. 4,	Westmoreland, ...	Four ribs fractured by mine cars.
4	Stephen Franko,	Slav,	Driver,	29	M.	South West No. 1, B.	Westmoreland, ...	Injured by fall of slate.
23	John Courtee,	Slav,	Miner,	37	M.	Eureka,	Westmoreland, ...	Contusion of hip by mine cars.
23	Richard Ford,	Italian,	Driver,	27	M.	Buckeye,	Westmoreland, ...	Body bruised by mine cars.

Oct.	7	Peter Breamer,	German,	Minor,	55	M.	Oscoda,	Allegheny,	Hand crushed necessitating amputation of finger by fall of slate. Injured, necessitating amputation of hand by mine cars.
	8	Frank Snitnopy,	Slav,	Extra driver,	17	S.	Standard shaft,	Westmoreland, ...	Foot bruised by mine cars.
	11	Grant Rose,	American, ..	Driver,	30	M.	Boyer,	Westmoreland, ...	Contusion of leg by mine cars.
	12	L. W. Brothers,	American, ..	Driver,	22	M.	Scottdale,	Payette,	Thigh fractured by fall of slate.
	16	Albert Lancaster,	American, ..	Miner,	24	M.	Eureka,	Westmoreland, ...	Thigh fractured by fall of slate.
	17	Joseph Anania,	Italian,	Driver,	42	M.	Claverly,	Westmoreland, ...	Ankle bruised by mine cars.
	21	George Adams,	American, ..	Driver,	25	M.	Waverly,	Westmoreland, ...	Ankle bruised by mine cars.
	23	Andrew Barlek,	Pole,	Miner,	22	M.	Empire,	Westmoreland, ...	Collar bone fractured by mine cars.
	24	August Dushlew,	Slav,	Miner,	15	M.	Eureka,	Westmoreland, ...	Leg fractured by mine cars.
	31	William Frame,	English,	Driver,	30	S.	Marguerite No. 2, ...	Westmoreland, ...	Thigh crushed by mine cars.
	3	Christopher Watson,	American, ..	Trap runner,	41	M.	Marguerite No. 2, ...	Westmoreland, ...	Leg bruised by mine cars.
	5	John Stroko,	Slav,	Coke hand,	48	M.	Waverly,	Westmoreland, ...	Hip dislocated by falling from railroad car.
	11	John Oenfrey,	Hungarian, ..	Miner,	43	M.	Boyer,	Westmoreland, ...	Ankle injured by fall of slate.
	12	Palme Oleson,	Austrian, ..	Miner,	46	M.	Calumet,	Westmoreland, ...	Arm and ribs fractured by mine cars.
	15	Norris Murray,	American, ..	Laborer,	16	S.	Eureka,	Westmoreland, ...	Injured by railroad car
	29	Michael Bucher,	Pole,	Miner,	38	S.	Marguerite No. 2, ...	Westmoreland, ...	Collar bone fractured and finger crushed.
	29	James Jinkowski,	Pole,	Miner,	38	M.	South West No. 2, ...	Westmoreland, ...	Scalp wound and ankle bruised by fall of slate.
	1	William O. Donnell,	English,	Driver,	19	M.	Pen Gas No. 4, ...	Westmoreland, ...	Back and side injured by mine cars
	1	James Stevenson,	American, ..	Mach. loader,	23	M.	Oscoda,	Allegheny,	Leg fractured by falling slate.
	5	Charles Marcus,	American, ..	Helper,	11	S.	Echel,	Westmoreland, ...	Leg fractured by mine cars.
	7	Charles Wingfield,	English,	Miner,	25	M.	Pen Gas No. 4, ...	Westmoreland, ...	Back and foot injured by fall of slate.
	22	Peter Hehall,	American, ..	Mach. loader,	21	S.	Oscoda,	Allegheny,	Leg fractured by mine cars.
	18	John Sup,	Pole,	Miner,	29	M.	Gassner No. 2, ...	Westmoreland, ...	Leg injured by fall of coal.
	24	Stephen Najeski,	Pole,	Coke hand,	19	S.	South West No. 3, ...	Westmoreland, ...	Fracture of leg by cage at shaft bottom.

Nov.

Dec.



Twelfth Bituminous District.

ARMSTRONG, JEFFERSON, CLEARFIELD, CAMBRIA AND INDIANA
COUNTIES.

Punxsutawney, Pa., March 6th, 1903.

Hon. James W. Latta, Secretary of Internal Affairs, Harrisburg.

Dear Sir: In compliance with the provisions of the Bituminous Mine Law, I herewith submit the annual report of this district for the year ending December 31st, 1902.

The report contains the usual tables, together with a description of the condition of the mines, and a description of the fatal accidents during the year. It will be noted that there has been a considerable increase in the production of coal for the year, and the quantity mined by machines is very much in excess of that of last year. The mines have worked very well during the year, and the number of accidents, fatal and non-fatal, are respectively nineteen and eighty-six, and many of these were entirely due to negligence on the part of the victims themselves. A summary of statistics and the usual tables will be found in their appropriate places in the report.

Respectfully yours,

R. HAMPSON,

Inspector.

Summary of Statistics for 1902.

Number of mines in district,	75
Number of mines in operation during 1902,	74
Number of tons of coal produced,	6,838,985
Number of tons shipped to market,	5,587,106
Number of tons sold at mines to local trade,	19,123
Number of tons consumed at mines in generating steam and heat,	148,038
Number of coke ovens in the district,	1,627
Number of coke ovens in operation during 1902,	1,627

Number of tons of coke produced,	571,875
Number of tons of coal used in manufacture of coke, ...	1,061,637
Number of tons produced by pick mining,	2,641,347
Number of tons produced by compressed air machines, ..	4,106,437
Number of tons produced by electrical machines,	91,191
Number of persons employed inside the mines,	7,697
Number of persons employed outside, including coke workers,	1,271
Number of persons employed at manufacture of coke, ...	529
Number of fatal accidents inside the mines,	18
Number of tons produced for each fatal accident inside, ..	379,943
Number of persons employed per fatal accident inside, ..	427
Number of fatal accidents outside,	1
Number of persons employed per fatal accident outside, ..	1,271
Number of wives made widows by fatal accidents,	10
Number of children orphaned by fatal accidents,	16
Number of non-fatal accidents inside of mines,	84
Number of persons employed per non-fatal accident in- side,	91
Number of non-fatal accidents outside,	2
Number of persons employed per non-fatal accident out- side,	635
Number of electric motors used inside,	23
Number of fans used for ventilation,	30
Number of furnaces used for ventilation,	42
Number of gaseous mines in operation during 1902,	7
Number of non-gaseous mines in operation during 1902, ..	67
Number of new mines opened in 1902,	7

A. Production of Coal During the Year 1902.

Names of Companies.	Tons.
Rochester and Pittsburg Coal and Iron Co.,	3,155,860
Berwind-White Coal Mining Co.,	504,572
John McLeavy & Co.,	123,520
Jefferson and Clearfield Coal and Iron Co.,	48,000
H. A. Bowers & Bro.,	42,873
S. A. Rinn,	18,000
Kurtz & Rinn,	135,600
Williams Coal Co.,	2,015
Gaskill Coal Co.,	37,590
Clearfield Bituminous Coal Corporation,	472,705
Urey Ridge Coal Co.,	144,350

Glenwood Coal Co.,	139,273
Indiana Coal Co.,	144,559
Beech Creek Coal and Coke Co.,	206,622
Clearfield and Cush Creek Coal and Coke Co.,	29,294
Reakirt Bros. & Co.,	47,840
Logan Coal Co.,	30,550
Gipsy Coal Co.,	1,200
Ellsworth-Dunham Coal Co.,	56,082
Cowanshannock Coal Co.,	606,282
Burnside Coal Co.,	62,093
Clearfield and Cambria Coal and Coke Co.,	24,012
Mosher & Jose,	6,890
Coalport Coal Co.,	14,256
Weaver & Ettla,	17,794
Pennsylvania Coal and Coke Co.,	71,434
Irvona Coal Co.,	161,148
Blaine Run Coal Co.,	81,343
S. Hegarty's Sons,	81,446
Peale, Peacock & Kerr,	157,045
Potts Run Land Co.,	1,568
Andrew Kennedy,	1,620
Alpha Coal Co.,	4,000
Gresmer & Co.,	598
Glasgow Coal Co.,	5,939
Joseph Schmittle,	14,254
Beccaria Coal Co.,	42,090
Fred. Bland,	38,242
Harbison-Walker Co.,	23,746
Bellwood Coal Co.,	60,828
Max Frick,	51,852
<hr/>	
Total,	6,838,985
<hr/>	

B. Showing the number of fatal and non-fatal accidents inside and outside the mines; number of tons of coal produced per fatal and non-fatal accident inside the mines; number of persons employed inside and outside; and the number employed inside and outside for every fatal and non-fatal accident for each company during 1902.

Names of Companies.	Number of lives lost inside.		Number of lives lost outside.		Total number of lives lost.		Number severely injured inside.		Number severely injured outside.		Total number severely injured.		Tons of coal produced per each life lost inside.		Tons of coal produced per serious injury inside.		Number employees inside of mines.		Number employees outside of mines.		Total number employed.		Number of employees inside for each life lost.		Number of employees inside for each severe injury.		Number of employees outside for each life lost.		Number of employees outside for each severe injury.	
	8	7	6	5	4	3	2	1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Rochester and Pittsburg Coal and Iron Co.,	1									1			394,482	60,689	60,689	3,715	58	372	58		3,715	372	58							
Berwind-White Coal Mining Co.,	1									1			168,191	45,870	45,870	659	60	300	60		659	300	60							
John McLeavy & Co.,	1									1			123,520	123,520	123,520	138	12	138	12		138	138	12							
Jefferson and Barnfield Coal and Iron Co.,	1									1			48,000	48,000	48,000	62	560	560	560		62	560	560							
Gaskell Coal Co.,	1									1			18,795	18,795	18,795	43	5	43	5		43	43	5							
Chesapeake and Potomac Telephone Co.,	1									1			472,705	472,705	472,705	560	174	174	174		560	560	174							
Glenwood Coal Co.,	1									1			139,275	139,275	139,275	138	12	138	12		138	138	12							
Indiana Coal Co.,	1									1			114,559	114,559	114,559	171	15	171	15		171	171	15							
Cowanahannock Coal Co.,	1									1			86,611	86,611	86,611	562	66	562	66		562	562	66							
Burnside Coal Co.,	1									1			593,141	593,141	593,141	75	8	75	8		75	75	8							
Pennsylvania Coal and Coke Co.,	1									1			62,093	62,093	62,093	46	128	82	82		128	82	82							
Irvine Coal Co.,	1									1			71,134	71,134	71,134	298	53	298	53		298	298	53							
Blaine Run Coal Co.,	1									5			81,343	32,229	32,229	135	11	135	11		146	146	11							
S. Hogarty's Sons,	1									1			81,343	81,343	81,343	118	11	118	11		118	118	11							
Peale, Peacock & Kerr,	1									1			137,045	137,045	137,045	190	16	190	16		206	206	190							
Max Frick,	1									2			26,924	26,924	26,924															
Totals,	18	1	19	84	2	86	375,940	81,416	7,697	1,271	8,968	428	92	1,271	685															

C. Classification of Fatal Accidents for the Year 1902.

	Inside of Mines.										Outside of Mines.										Grand total.		
	Coal.	State.	Rock.	By Falls of	By explosion of gas.	Smothered by gas.	Powder and dynamite.	By blasts, etc.	Shafts.	Slopes.	Manways, breasts, etc.	Crushed at batteries.	By mules.	Suffocated by coal, etc.	Miscellaneous causes.	Total inside.	By cars.	By machinery.	By suffocation.	By boiler explosions.		Miscellaneous causes.	Total outside.
January.	1																						1
February.		1																					1
March.																							
April.					1																		
May.																							
June.																							
July.																							
August.																							
September.																							
October.																							
November.																							
December.																							
Totals.	1	1			1																		1

•Electric shock

G. Nationality of Employes Killed or Fatally Injured Inside and Outside the Mines During 1902.

	Americans.	English.	Irish.	Germans.	Poles.	Hungarians.	Italians.	Slavs.	Swedes.	Totals.
January,			1							1
February,				1			1			2
March,		1								1
May,		1						1		2
July,							4			4
August,		1						1		2
September,						1				1
October,									1	1
November,	1				1					2
December,	1					1				2
Totals,	1	3	1	1	2	2	5	3	1	19

H. Nationality of Employes Severely Injured Inside and Outside the Mines During 1902.

	Americans.	English.	Welsh.	Scotch.	Irish.	Germans.	Poles.	Hungarians.	Italians.	Slavs.	Russians.	Swedes.	Finns.	Totals.
January,	4				1				1					6
February,	3			1										4
March,	1	5	1	2			1							11
April,	1				1			1						3
May,	3	3		2			1		1	2		1		13
June,	3	3							1	1				9
July,	4			1			1	1	1	3				11
August,	1								1				1	5
September,	1							1						4
October,	4	1							1			1		7
November,	1	1	1			1			1			2		7
December,	1		1				1				1			6
Totals,	30	12	3	6	2	1	1	3	12	6	2	4	1	66

I. Giving names of operators and mines, kind of openings, type and size of fans; size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each employe per minute in Twelfth Bituminous District for the year 1902.

Names of Operators and Mines.	Kind of opening.	Gaseous or non-gaseous.	Method of ventilation.	Diameter and width of fan in feet.	Name of fan.	Power used.	Area of furnace bars in square feet.	Number of air splits of air currents.	Number of cubic feet of air per minute entering the mine at inlet.	Total quantity of air per minute circulating in all the splits in cubic feet.	Number of cubic feet per minute passing out at outlet.	Number of persons employed inside.	Average number of cubic feet per minute provided for each person.
Rochester and Pittsburg Coal and Iron Co.													
Walston No. 1.	Slope.	Gaseous.	Fan.	25	Guibal.	Steam.	80,000	5	80,000	80,000	80,000	410	146
Walston No. 3.	Drift.	Non-gas.	Fan.	7	Silene.	Steam.	80,000	1	80,000	80,000	80,000	71	81
Walston No. 4.	Drift.	Non-gas.	Fan.	20	Guibal.	Steam.	85,000	2	85,000	85,000	85,000	102	143
Walston No. 6.	Drift.	Gaseous.	Fan.	20	Guibal.	Steam.	80,000	2	80,000	80,000	80,000	149	221
Elk Run shaft.	Shaft.	Gaseous.	Fan.	20	Guibal.	Steam.	80,000	2	80,000	80,000	80,000	619	153
Adrian.	Slope.	Gaseous.	Fan.	25	Guibal.	Steam.	80,000	5	80,000	80,000	80,000	776	141
Florence No. 1.	Slope.	Gaseous.	Fan.	6	Guibal.	Steam.	80,000	1	80,000	80,000	80,000	18	223
Florence No. 2.	Drift.	Non-gas.	Furnace.	6	Silene.	Steam.	80,000	1	80,000	80,000	80,000	20	219
Florence No. 3.	Drift.	Non-gas.	Furnace.	5	Silene.	Steam.	80,000	1	80,000	80,000	80,000	20	219
Eleanora No. 1.	Drift.	Gaseous.	Fan.	25	Guibal.	Steam.	114,000	2	114,000	114,000	114,000	220	219
Eleanora No. 2.	Slope.	Gaseous.	Fan.	20	Guibal.	Steam.	83,000	2	83,000	83,000	83,000	210	257
Berwind-White Coal Mining Co.													
West Eureka No. 4.	Slope.	Non-gas.	Fan.	20	Guibal.	Steam.	100,000	1	100,000	100,000	100,000	176	565
West Eureka No. 5.	Slope.	Gaseous.	Fan.	20	Guibal.	Steam.	48,000	1	48,000	48,000	48,000	223	215
West Eureka No. 7.	Slope.	Gaseous.	Fan.	8	Silene.	Steam.	20,000	1	20,000	20,000	20,000	120	166
West Eureka No. 10.	Drift.	Non-gas.	Furnace.	8	Furnace.	Steam.	12,000	1	12,000	12,000	12,000	148	260
West Eureka No. 11.	Drift.	Non-gas.	Furnace.	8	Furnace.	Steam.	23,000	1	23,000	23,000	23,000	34	785
West Eureka No. 13.	Drift.	Non-gas.	Furnace.	8	Furnace.	Steam.	23,000	1	23,000	23,000	23,000	34	785
John McLeavy & Co.													
Conrad.	Drift.	Non-gas.	Furnace.	6	Capell.	Steam.	10,000	1	10,000	10,000	10,000	27	270
Shollar.	Slope.	Gaseous.	Fan.	12	Capell.	Steam.	60,000	2	60,000	60,000	60,000	111	540
Chenfield Bituminous Coal Corporation.													
Canoe Ridge No. 1.	Drift.	Non-gas.	Furnace.	6	Capell.	Steam.	20,000	1	20,000	20,000	20,000	460	121
Canoe Ridge No. 2.	Drift.	Non-gas.	Fan.	8	Capell.	Steam.	20,000	1	20,000	20,000	20,000	460	121
Canoe Ridge No. 3.	Drift.	Non-gas.	Fan.	8	Capell.	Steam.	16,000	1	16,000	16,000	16,000	460	121

TABLE I—Continued.

Names of Operators and Mines.	Kind of opening.	Gaseous or non-gaseous.	Method of ventilation.	Diameter and width of fan in feet.	Name of fan.	Power used.	Area of furnace bars in square feet.	Number of air splits of air currents.	Number of cubic feet of air per minute entering the mine at inlet.	Total quantity of air per minute circulating in all the splits in cubic feet.	Number of cubic feet per minute passing out at out- let.	Number of persons employed inside.	Average number of cubic feet per minute provided for each person.
Penn No. 2,	Slope.....	Non-gas.	Furnace,	6 x 6	.....	.....	36	1	12,000	12,000	12,000	43	279
Jefferson and Clearfield Coal and Iron Co. Sykes shaft,	Shaft.....	Non-gas.	Fan,.....	8	Stine,	Steam.....	.....	1	25,000	25,000	25,000	44	568
Hillman,	Drift.....	Non-gas.	Furnace,	8 x 6	.....	.....	48	.....	12,000	12,000	12,000	70	170
Penn,	Drift.....	Non-gas.	Furnace,	8 x 6	.....	.....	48	2	12,000	12,000	13,000	55	235
Fuller Run,	Drift.....	Non-gas.	Furnace,	7 x 6	.....	.....	42	1	10,000	10,000	11,000	65	170
Gipsy,	Drift.....	Non-gas.	Natural,	.....	.....	.....	.....	.....	.....	.....	.....	11	.....
Ellsworth-Dunham Coal Co. Victor No. 11,	Drift.....	Non-gas.	Fan,.....	10	Stine,	Steam.....	.....	2	22,000	22,000	22,000	128	171
Cowanshannock Coal Co. Yatesboro No. 1,	Drift.....	Non-gas.	Fan,.....	13	Capell,	Steam.....	.....	8	120,000	120,000	120,000	562	225
Yatesboro No. 2,	Drift.....	Non-gas.	Fan,.....	20	Robinson,	Steam.....	.....	1	7,000	7,000	7,000	.....	.....
Burnside Coal Co. Burnside,	Drift.....	Non-gas.	Furnace,	7 x 6	.....	.....	42	2	18,000	18,000	18,000	75	240
Clearfield and Cambria Coal and Coke Co. Clearfield,	Drift.....	Non-gas.	Furnace,	7 x 6	.....	.....	42	3	33,000	33,000	33,000	55	600

Mosher & Jose.									
Wilson Run,	Coalport Coal Co.	Drift,	Non-gas.	Furnace,	4 x 5	.....	.....	.....	.....
Superior,	.....	Drift,	Non-gas.	Furnace,	5 x 6	.....	.....	.....	.....
O'Shanter,	Weaver & Ettla.	Drift,	Non-gas.	Furnace,	8 x 6	.....	.....	.....	.....
Glasgow,	Glasgow Coal Co.	.....	.....	.....	.....	.....	.....	.....	.....
Pleasant Hill,	Joseph Smittle.	Drift,	Non-gas.	Furnace,	7 x 6	.....	.....	.....	.....
Mountaindale,	Beccaria Coal Co.	Drift,	Non-gas.	Furnace,	7 x 6	.....	.....	.....	.....
Blands,	Fred Bland.	Drift,	Non-gas.	Furnace,	7 x 6	.....	.....	.....	.....
Harbison-Walker,	Harbison-Walker Co.	Drift,	Non-gas.	Furnace,	5 x 6	.....	.....	.....	.....
Great Bend,	Bellwood Coal Co.	Drift,	Non-gas.	Furnace,	5 x 6	.....	.....	.....	.....
Frick,	Max Frick.	Drift,	Non-gas.	Furnace,	7 x 6	.....	.....	.....	.....
Potts Run,	Potts Run Land Co.	Drift,	Non-gas.	.....	.....	.....	.....	.....	.....
Berwindale,	Andrew Kennedy.	Drift,	Non-gas.	Furnace,	5 x 6	.....	.....	.....	.....
Alpha,	Alpha Coal Co.	Drift,	Non-gas.	Furnace,	4 x 4	.....	.....	.....	.....
Turner Run,	Turner Run Coal Co.	.....	.....	.....	.....	.....	.....	.....	.....
Cheston,	Gresmer & Co.	Drift,	Non-gas.	Furnace,	3 x 4	.....	.....	.....	.....

J. Names of mines using coal cutting machines, names of machines, power used, geological and local names of seams, thickest and thinnest seams where machines are used, and the approximate number of tons produced by machines during 1902.

Kind of opening.	Gaseous or non-gaseous.	Name and number of machines in use.				Total machines used.	Power used by machines.	Geological and local name of seam.	Average thickness in inches.		Height of seam in inches.		Approximate number of tons produced by machines.
		Ingersoll.	Sullivan.	Harrison.	Morgan-Gardner.				Thickest.	Thinnest.			
Rochester & Pittsburg Coal & Iron Co., { Berwind-White Coal Mining Co., Clearfield Bituminous Coal Corporation, .. Beaumont Creek Coal and Coke Co., Crawfordsburg Coal Co., Glenwood Coal Co., Grey Ridge Coal Co., Jefferson and Clearfield Coal and Iron Co., ..	Slopes,...	Gaseous,	52	59	52	.....	163	Compressed air,...	Lower Freeport, ..	66	7.6	3.6	2,988,529
	Shafts,...	and							Lower Freeport, ..	72	7.0	5.0	115,670
	Slopes,...	Gaseous,	.....	5	12	.....	17	Compressed air,...	Lower Freeport, ..	48	4.0	.....	337,371
	Drift,...	Non-gas.	.....	.....	23	.....	23	Compressed air,...	Lower Freeport, ..	44	3.8	.....	83,685
	Slopes,...	Non-gas.	.....	40	.....	.....	40	.....	Lower Freeport, ..	48	4.0	.....	.....
	Drift,...	Non-gas.	.....	.....	3	.....	3	Electricity,.....	Upper Freeport, ..	48	4.0	.....	51,691
	Drift,...	Non-gas.	.....	.....	2	.....	2	Electricity,.....	Lower Freeport, ..	48	4.0	.....	39,500
	Shaft,...	Non-gas.	4	2	2	.....	8	Compressed air,...	Lower Freeport, ..	60	5.0	.....	48,600
	Totals,		56	106	97	5	264						4,197,628

Description of Accidents.

Michael Malone was instantly killed by a fall of rock in his working place, Walston 3, January 2d. The machine men were making a cut at the face of the room, and Malone was sitting near the neck of the room, when without any warning the stone fell upon him. The accident was unforeseen.

William Beckenstine was killed by falling into a shaft at the compressor and pumping station, on the night of Feb. 10th. He and some other employes were at work hoisting coal from the mine for boilers, and instead of hoisting the cage that was at the bottom of the shaft to the surface, he called to one of the men on top to help him push the empty car as he supposed on to the cage, but instead they pushed it into the open shaft, and he fell down with the car and was killed.

Joseph Murrel was killed by electric shock in Florence mine February 24th. The machine cutter had finished cutting in a room, and asked the scraper to go up the heading and into the next room to see if it was ready for cutting, and he started off, but failing to come back the cutter went to look for him, and found him lying on the heading in front of the next room, and from his appearance he must have accidentally struck against the wire, as there was a mark on his temple. He had been accustomed to going in and out of the rooms in the performance of his work, and knew the danger from the wire.

James Parks, a boy aged 14, was killed by a fall of slate in Yatesboro mine March 22d. He and his brother were loaders, and they had fired a shot in the coal when a slab of slate fell on both of them, killing the younger boy. The place was ten feet in width and this was about the fourth cut they were taking out. The slate above the coal is full of slips, but they did not think it was dangerous, so had not set any props, and in this respect they were a little careless, but thought that the place being so narrow, the slate would not fall.

Nelson Knapp, scraper, was killed by a fall of coal in West Eureka No. 6 mine May 23d. The machine cutter was taking a skip off the side of the room, and had started work at a cross cut and so had a loose end, and they had no sprags under the coal at this loose end, and as they were cutting the third board, the coal fell away from a slip, and caught Knapp. This accident was due to the men's own carelessness, as the coal at this point was eight feet thick.

Andy Katsmarick, Slav, was fatally burned by an explosion of gas in Eleanora No. 2 mine, May 27th. A short time before, gas had been found in a hole in the roof near the face of the heading, and as the men who were working in this heading had gone away, they put an obstruction across the heading; but on this morning after Katsmarick and his butt, who worked in a room not far away, had loaded

their first car, Katsmarick went out on the heading, and crawled over the obstruction and ignited the gas and was so badly burned and overcome with the after damp that his life was lost. This accident would not have occurred had he not gone past the danger barrier that was placed across the heading.

Dominic Micala and Joseph Basil, Italians, were killed by mine cars on Walston No. 3 slope. The men were going into the mine to work on night shift, and instead of going by the traveling road, they went on slope at the time a loaded trip was being hoisted, and as the trip was pulling over the knuckle, a drawbar broke, and the drag failed to hold the cars, which ran down the slope and caught the men. This accident was due to their own carelessness in not going on the traveling way.

Peter Shivot, Italian, was so seriously injured by a bolt on mine car striking him on the temple that he died two days afterwards. He was employed as driver in Shollar mine, and was bringing a loaded car through the crosscut, and as the mule balked, he put a block of wood on the rail to hold the car, and as the mules again started up the car swung around, and a bolt on the end of the car struck him on the temple fracturing his skull.

Dominick Melack, Italian, in Florence mine, July 31st, died from electric shock. He and some more miners were coming down the heading, and the motorman had left a part of his trip standing on the heading, while he had gone up a cross heading for the balance of the trip, and this man instead of keeping on the right side of trip, where he would have been safe, took to the left side, and had to climb between the cars to get on the right side of the heading, and in doing so his head came in contact with the trolley wire, and he was dead when he was taken from between the cars. This accident was due to his own carelessness, as he would have been safe had he kept on same side of trip as his companions.

George Wesley was killed by a fall of rock in West Eureka No. 10 mine, August 23d. He had finished his day's work, and was collecting his tools when a rock fell from a slip and killed him. This accident was due to his own carelessness, as he knew the rock was loose, but had set no props under it to secure it.

Michael Miney was killed by a fall of slate in Adrian mine August 24th. A squeeze had come on one of the headings and the assistant foreman had a gang of men at work trying to stop it by putting up cribs and props, and as Miney was measuring for the length of a prop, a slab of slate fell upon him, fatally injuring him.

John Hieha was killed in Burnside mine, September 15th. He had started a room just inside a clay vein, and to make the loading easier had knocked out two props that were set there, and he was fixing his track when a flag of slate fell on him. The accident was

due to his own carelessness, as he had been warned by one of his fellow workmen not to knock out the props, as the roof was not safe.

Steve Harnata was killed by a fall of slate in Yatesboro mine, September 30th. He was working in the main slope heading and they had loaded the coal from under the slate, and were trimming up the rib side when a piece of slate fell from a slip and struck him. He was sent to the hospital but died on October 5th.

Peter Johnson was killed by fall of roof in Eleanora mine October 11, 1902. He and a companion were taking down some roof in the heading, and he was instructed to use dynamite to break down some cross bars, and while his companion was fixing up a cartridge, Johnson took an axe and cut the bottom of the prop to a feather edge, and while they were putting the dynamite on top of the timber it fell, and Johnson was caught under the fall and killed.

Anthony Cunaraxah was killed by a fall of slate in Sykes shaft November 11th, 1902. I had been in the room at 8 o'clock that morning and told the machine man to set a prop which he did. The miner shot the coal and knocked out the prop, and while loading his car a large piece of slate fell upon him injuring him so that he died in a few hours. The accident was due to his own carelessness as his companion told him not to knock out the prop, but if he did, then to take down the slate, but he was in too big a hurry.

Dem Palina was killed by a car in Glenwood mine November 11th, 1902. As the mine is such a long distance from the tippie, the mine foreman had been in the habit of giving the miners an empty car so they could ride down the tramroad and through the tunnel to the tippie. On this evening he had given them an empty car, but when they got to the tunnel mouth they changed this for another one that would run easier, but which had a defective brake, and as they were going through the tunnel they could not control the car, and all the men but Palina managed to get out, but before he could do so the car left the track and he was caught between the car and roof, and injured so that he died a few hours later. The men were to blame for if they had used the car they started out with, they would have gotten safely through to the tippie.

Vincent Molysock was killed by a fall of slate in National No. 1 mine, December 1st, 1902. He and his companion had cleaned up the slate from the side of a heading stump, but had failed to pull down some of the slate above the coal that was loose, and while they were loading the mine car a piece of slate fell from a slip and caught the boy injuring him so that he died the same day. The accident was due to the man's carelessness, as he should have taken down the loose slate.

Herbert Harris was killed by a fall of slate in Blaine Run No. 1 mine, December 16th. He and his brother were turning a room from

the heading, and had pushed the partly loaded car back so they could take down some ripping, and as the ripping fell a piece must have struck his foot, for he fell backward, striking his head on the iron bumper of a car and his skull was fractured.

Condition of Mines—Jefferson County.

The Rochester and Pittsburg Coal and Iron Co. has the largest number of mines, and the largest production of coal in this county, and at the present time they are operating the following mines. Walston Nos. 3, 4 and 6, Elk Run shaft, Adrian, Florence Nos. 1 and 2 and Eleanora Nos. 1, 2 and 3.

Walston No. 3 is a slope mine and is very extensive, and they have much trouble with clay veins and pinch outs, and it makes it a difficult mine to work properly, but during the past year its general condition was good. The fan is of good capacity, and on my last visit they had shortened the intake very much and were bringing the air current very much nearer the face of the workings. A new water ditch was completed during the year, and the water drained in to the Elk Run shaft workings.

Walston No. 4 mine has not had very much solid coal to work during the year, and they are pulling back heading pillars. The general condition of the mine was fair.

Walston No. 6 was in good condition at the different visits, as they have a large fan at work, capable of producing a large volume of air.

In Elk Run shaft there has been great improvements made during the year, as the tunnel connecting Adrian mine has been completed. Large pumps have been installed, also haulage by electricity. The general condition of the mine was good.

Adrian is still the largest mine, and improvements have been made during the year by extending the haulage system, and grading the main slope near the foot, and they are putting in a large Capell fan for ventilating the mine, as the one in use was not of sufficient capacity. The condition of the mine was good.

Florence No. 1 mine is getting to be very large, and a new Capell fan is being put in which it is expected will be fully ample to ventilate the mine for a long time. No. 2 mine has been pushed in for quite a distance, and a good body of coal has been opened up. The mines have been well looked after, and the ventilation at all times was well distributed.

Eleanora No. 1 mine has been confined to pillar work during the year, and there is very little left now. No. 2 has been the big mine, and they have produced a large quantity of coal, and have pushed the workings ahead at a good rate. No. 3 mine on one side is confined to

pillar workings, and on the left they have opened up considerable coal. The ventilation and drainage were good.

Walston No. 1 mine was again started during the latter part of the year, as there is a large body of coal, and lots of pillars to be worked yet. Walston No. 5 has been worked very regularly, and the condition of the mines has been good. These mines are operated by Kurtz & Rinn, and the product goes to the R. & P. C. & I. Co.

The following mines are operated by the Berwind-White Coal Mining Co.; West Eureka Nos. 4, 6, 7, 10, 11 and 13. No. 4 mine has been developed very much ahead of the main straight heading, and an opening for ventilation and a traveling way have been put in. The mine was in good condition. No. 6 mine has been opened up considerably near the foot of the slope, and they are putting in a large Capell fan for ventilating, as the present fan has reached its limit, and something larger was needed as this is to be a very large mine. No. 7 is a new mine, and the work so far has been confined to opening up the main slope, and driving from both ends of headings to serve as traveling and airways. Nos. 10 and 11 mines have been all confined to pillar work, and old No. 13 has been finished, but a new opening across the hill has been put in and they will commence shipping early in the year.

The general condition of all these mines was good.

Conrad and Shollar mines have been visited regularly during the year and have always been found in good condition.

Sykes shaft, operated by the Jefferson Coal and Iron Co., commenced shipping early in the year, and they have made many improvements about the surface and in the mine, and on my last visit had commenced to sink a large shaft, at which they will erect a large fan for ventilation of this, and a portion of Soldier mine adjoining.

Penn No. 2 mine and Hillman mine were visited regularly and found in good condition. At Hillman mine a new haulage system and compressor for cutting coal with machines has been installed during the year.

Williams mine near Horatio is a new mine, which has just commenced shipping.

Indiana County Mines.

The Clearfield Bituminous Coal Corporation operates Canoe Ridge Nos. 1, 2 and 3, all drift mines; coal is cut with Puncher machines, and mines ventilated by fans and furnace. Mines were well looked after.

At the Urey mines they have worked very well, and No. 2 was in operation most of the year with a small force of men. The condition of the mines was good.

The Glenwood Coal Co. has operated two mines during the year, one in Indiana county has worked very well and was in good condition.

The Indiana Coal Co. has had three mines working during the year. One portion of No. 1 mine was deficient in ventilation at one of my visits, but was remedied on the succeeding ones. They have been trying to get beyond the fault into better coal, but at my last visit the outlook was not very encouraging. No. 2 has been opened up considerably. No. 3 has done very little work owing to the coal being low, and it was difficult to get men to work it. No. 4 has not worked as steadily as the No. 1 and 3 mines, and conditions were not very good.

Penn mine has worked regularly during the year, and most of the work has been confined to pillar drawing, and this year will see the mine exhausted. Condition of mine was good.

Cush Creek mine was visited at the regular intervals during the year. Old No. 2 mine was abandoned and a new opening was put in on the upper seam. The mine was in good condition on my usual visits.

Fuller Run mine was in good condition at the several visits made during the year.

Gipsy mine did not work regularly enough during the year to deserve much notice, and was visited only once.

Arcadia mines Nos. 1, 2 and 3 were visited at the regular intervals, and were always found in good condition as regards ventilation and drainage. At my last visit there were less than the required number of men to come under the law at No. 3 mine, and it will be shut down.

Victor No. 11 mine has been pushed ahead during the year, and it was always in a good condition at the different visits.

Clearfield County Mines.

At Glenwood No. 10, operated by the Glenwood Coal Co., the fault has been cut through, but they cannot open out new ground very well. They have put a fan at the shaft for ventilating the mine, and it is now in good condition.

Burnside mine has been worked regularly, and they have made a tramroad and use a locomotive for hauling the coal from the second opening, and they have also put a water level into this mine, which will be of great service. The old opening was kept in good condition, and the new opening was in fair condition.

Clearfield mine was worked steadily during the year, and they are installing compressors so as to use coal cutting machines in the different openings. Ventilation and drainage were good.

Wilson Run mine has never employed much more than twenty men, but it was found in good condition during the year.

At National Nos. 1 and 2 mines they have worked very well during the year. No. 1 mine has had trouble with a fault, which has kept them from opening out the mine as fast as they would have liked, and on my last visit they were putting another opening into the same hill as No. 1. No. 2 was confined mostly to pillar working and will not last much longer.

Irvona No. 3 mine was in good condition as regards ventilation, but in one portion of the mine the drainage was poor. Electric power for haulage purposes has been installed at this mine. At No. 4 mine some times I would find men at work and other times none.

Oakland mines Nos. 1 and 2, operated by Hegarty's Sons, have worked fairly well during the year, and No. 1 mine was in good condition. No. 2 was only in fair condition.

Blaine Run Nos. 1 and 2 were regularly visited during the year, and No. 1 mine was always found up to the standard required, and the same can be said in regard to No. 2 mine.

Superior mine has not had very many men at work during the year, so they have not opened up much territory. The mine has been kept in good condition.

Gazzam mine has worked very regularly, and they have cut a long ditch for the drainage, and have pushed the work at the back end of the old mine, and the coal is turning out better. The mine was in good condition.

O'Shanter mine was found working at two of the visits during the year, and they have put in a new opening behind the fault, and the old mine is now confined to pillar working. It was in good condition.

Bloomington mines were visited regularly during the year, and Nos. 3 and 4 mines are now confined to mostly pillar working, while No. 5 is promising to be the big mine now. The condition of these mines was good.

Potts Run is a new mine just commenced shipping, and was visited once, and they were making preparations for furnace and second opening.

Kennedy mine is a small operation near Berwindale which was opened during the year, and so far at my visits I never found more than ten men, but the mine was in good condition, as they have a suitable furnace.

Cheston is a new mine which shipped a small quantity of coal at the end of the year. They had only a temporary furnace, and no second opening at the time of my visit.

Cambria County Mines.

Blands mine was visited at regular intervals during the year, and was in fair condition.

Frick mine was always in good condition at the different visits, but they are still having trouble with poor roof, and have not yet succeeded in cutting through the fault; a tunnel has been driven from this vein to the one immediately above, and they will soon ship coal from this vein, which is about two and a half feet in thickness, and is of good quality.

Great Bend mine is in about same condition as last year. An opening is being driven through the hill, which will materially aid the ventilation.

Harbison-Walker mine, the product of which is used at the brick works at this place, works very regularly and its condition was good.

Mountaindale mine has opened considerable new ground during the year, and the coal is better than they have heretofore had, and the condition of the mine was all right.

Pleasant Hill mine has only a small number of men employed, but the mine has been well looked after.

Glasgow mine was visited twice during the year, but they struck a fault, and abandoned the first mine they opened, and are now trying to locate a new mine on one of the other seams.

Armstrong County Mines.

Yatesboro Nos. 1 and 2 are the only mines at present in this county. No. 1 mine has worked very well during the year, and considerable new work has been commenced, and the condition of the mine was good.

No. 2 mine has been developed to some extent, and they are now ready for shipping coal, and have installed a large Robinson fan for the ventilation of the mine.

New Mines and Improvements.

The following are new mines opened during the year, but some are not yet ready for shipping.

Alpha Coal Mining Co. has opened a new mine which shipped coal during the latter part of the year. Mine called Alpha No. 1.

Turner Run Mine.—Turner Run Coal Co. will be shipping from their new mine early in 1903.

Helman-Edelblute & Co. have opened a new mine on Turner Run, which will soon be ready to ship coal. These mines are in the vicinity of Coalport, and the coal will be shipped via Cresson and Coalport Railroad.

Cheston mine, operated by Gresmer & Co., is a new mine opened the last year, which shipped some coal in December.

Berwindale mine, operated by A. Kennedy, has been shipping a small quantity for several months. This mine and the Cheston will both ship via P. and N. W. R. R.

The Beech Creek Coal and Coke Co. is opening Arcadia mines Nos. 4 and 5, and will be ready for shipping in the spring.

The Indiana Coal Co. is also opening a mine adjacent to the above, and Stott Bros. are also opening a new mine in the same neighborhood, and they are expecting to ship coal this spring. This coal will be shipped over the N. Y. Central R. R.

Potts Run Nos. 1 and 2 are new mines just commencing to ship; coal will be shipped by Clearfield Southern and N. Y. Central R. R.

Yatesboro No. 2 is a new mine opened this year. The Williams mine is also a new mine, and coal from both these mines will be shipped over the B. R. & P. R. R.

Hillsdale is a new mine, opened by the Hillsdale Coal and Coke Co., near Gipsy, Indiana county. The coal will be shipped by N. Y. Central R. R.

TABLE 1—Showing names of operators, railroads, etc., and location of collieries in the Twelfth Bituminous District for the year 1902.

Names of Operators and Collieries	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Rochester and Pittsburg Coal and Coke Co.						
Walston No. 3.	Jefferson.	L. M. Robinson.	Punxsutawney.	.....	.....	B. R. & P. R. R.
Walston No. 4.	Jefferson.	L. M. Robinson.	Punxsutawney.	.....	.....	B. R. & P. R. R.
Walston No. 6.	Jefferson.	L. M. Robinson.	Punxsutawney.	.....	.....	B. R. & P. R. R.
Berwind-White Coal Mining Co.						
West Eureka No. 4.	Jefferson.	Thomas A. Fisher.	Philadelphia.	A. J. Cook.	Horatio.	Pennsylvania Railroad.
West Eureka No. 6.	Jefferson.	Thomas A. Fisher.	Philadelphia.	A. J. Cook.	Horatio.	Pennsylvania Railroad.
West Eureka No. 7.	Jefferson.	Thomas A. Fisher.	Philadelphia.	A. J. Cook.	Horatio.	Pennsylvania Railroad.
West Eureka No. 10.	Jefferson.	Thomas A. Fisher.	Philadelphia.	A. J. Cook.	Horatio.	Pennsylvania Railroad.
West Eureka No. 11.	Jefferson.	Thomas A. Fisher.	Philadelphia.	A. J. Cook.	Horatio.	Pennsylvania Railroad.
West Eureka No. 13.	Jefferson.	Thomas A. Fisher.	Philadelphia.	A. J. Cook.	Horatio.	Pennsylvania Railroad.
John McLeavy & Co.						
Conrad.	Jefferson.	John McLeavy.	Punxsutawney.	.....	.....	Pennsylvania Railroad.
Shollar.	Jefferson.	John McLeavy.	Punxsutawney.	.....	.....	Pennsylvania Railroad.
Clearfield Bit. Coal Corporation.						
Canoe Ridge No. 1.	Indiana.	R. A. Shillingford.	Clearfield.	W. A. Broadmeadow.	Kossiter.	N. Y. C. & H. R. R. R.
Canoe Ridge No. 2.	Indiana.	R. A. Shillingford.	Clearfield.	W. A. Broadmeadow.	Kossiter.	N. Y. C. & H. R. R. R.
Canoe Ridge No. 3.	Indiana.	R. A. Shillingford.	Clearfield.	W. A. Broadmeadow.	Kossiter.	N. Y. C. & H. R. R. R.
Gazzan.	Clearfield.	R. A. Shillingford.	Clearfield.	James Methven.	Gazzan.	N. Y. C. & H. R. R. R.
Urey Ridge Coal Co.						
Urey No. 1.	Indiana.	Thomas Bells.	Burnside.	.....	.....	Pennsylvania Railroad.
Urey No. 2.	Indiana.	Thomas Bells.	Burnside.	.....	.....	Pennsylvania Railroad.
Urey No. 3.	Indiana.	Thomas Bells.	Burnside.	.....	.....	Pennsylvania Railroad.
Glenwood Coal Co.						
Glenwood No. 10.	Indiana.	A. M. Riddle.	Glen Campbell.	.....	.....	Pennsylvania Railroad.
Glenwood No. 11.	Clearfield.	A. M. Riddle.	Glen Campbell.	.....	.....	Pennsylvania Railroad.
Indiana Coal Co.						
Indiana No. 1.	Indiana.	George Scott.	Philpsburg.	.....	.....	P. R. R. & N. Y. C. & H. R. R.
Indiana No. 2.	Indiana.	George Scott.	Philpsburg.	.....	.....	Pennsylvania Railroad.
Indiana No. 3.	Indiana.	George Scott.	Philpsburg.	.....	.....	Pennsylvania Railroad.
Indiana No. 4.	Indiana.	George Scott.	Philpsburg.	.....	.....	Pennsylvania Railroad.

Beech Creek Coal & Coke Co. Arcadia No. 1,	Indiana,	W. C. Lingle,	Patton, .....	.....	.....	N. Y. C. & H. R. R. R. R.
Arcadia No. 2,	Indiana,	W. C. Lingle,	Patton, .....	.....	.....	N. Y. C. & H. R. R. R. R.
Arcadia No. 3,	Indiana,	W. C. Lingle,	Patton, .....	.....	.....	N. Y. C. & H. R. R. R. R.
Clearfield & Cush Creek Coal & Coke Co. Cush Creek No. 1,	Indiana, .....	.....	.....	.....	Glen Campbell, ..	N. Y. C. & H. R. R. R. R.
Cush Creek No. 2,	Indiana, .....	.....	.....	.....	Glen Campbell, ..	Pennsylvania Railroad.
Pennsylvania Coal & Coke Co. National No. 1,	Clearfield, ..	J. L. Mitchell,	Philadelphia, ..	.....	.....	Pennsylvania Railroad.
National No. 2,	Clearfield, ..	J. L. Mitchell,	Philadelphia, ..	.....	Ebensburg,	Pennsylvania Railroad.
Irvena Coal Co. Irvena No. 3,	Clearfield, ..	J. W. Erdis,	Philadelphia, ..	.....	Coalport,	Pennsylvania Railroad.
Irvena No. 4,	Clearfield, ..	J. W. Erdis,	Philadelphia, ..	.....	Coalport,	Pennsylvania Railroad.
Blaine Run Coal Co. Blaine Run No. 1,	Clearfield, ..	.....	.....	.....	Coalport,	Pennsylvania Railroad.
Blaine Run No. 2,	Clearfield, ..	.....	.....	.....	Coalport,	Pennsylvania Railroad.
Oakland No. 1,	Clearfield, ..	.....	.....	.....	Coalport,	Pennsylvania Railroad.
Oakland No. 2,	Clearfield, ..	.....	.....	.....	Coalport,	Pennsylvania Railroad.
S. Hegarty's Sons. Peale, Peacock & Kerr. Bloomington Nos. 3 and 4,	Clearfield, ..	Alex. Dunsmore, ..	Glen Richey, ..	.....	Glen Richey,	N. Y. C. & H. R. R. R. R.
Bloomington No. 5,	Clearfield, ..	Alex. Dunsmore, ..	Glen Richey, ..	.....	.....	N. Y. C. & H. R. R. R. R.
Walston No. 1,	Jefferson,	S. A. Rinn,	Punxsutawney, ..	.....	Walston,	B. R. & P. R. R.
Kurtz & Rinn. Walston No. 5,	Jefferson,	S. A. Rinn,	Punxsutawney, ..	.....	Walston,	B. R. & P. R. R.
Williams Coal Co. Williams,	Jefferson, .....	.....	.....	.....	Lindsey,	B. R. & P. R. R.
Gaskill Coal Co. Penn No. 2,	Jefferson, .....	.....	.....	.....	.....	Pennsylvania Railroad.
Jefferson & Clearfield C. & I. Co. Sykes shaft,	Jefferson,	L. W. Robinson, ..	Punxsutawney, ..	.....	Reynoldsville, ..	B. R. & P. R. R.
H. A. Bowers & Bro. Hillman,	Jefferson,	H. A. Bowers,	Punxsutawney, ..	.....	.....	Pennsylvania Railroad.
Williams mine,	Jefferson, .....	.....	.....	.....	.....	B. R. & P. R. R.
Reakirt Bros. & Co. Penn,	Indiana,	F. A. VonBoynburgh	Philadelphia, ..	.....	Glen Campbell, ..	Pennsylvania Railroad.
Logan Coal Co. Fuller Run,	Indiana, .....	.....	.....	.....	Dunlo,	Pennsylvania Railroad.

TABLE I—Continued.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Gipsy Coal Co.	Indiana.....					
Ellsworth-Dunham Coal Co.	Indiana.....					N. Y. C. & H. R. R. R.
Victor No. 11.	Indiana.....					N. Y. C. & H. R. R. R.
Cowanshannock Coal Co.	Armstrong.....	L. W. Robinson.	Punxsutawney.	James Craig.	Yatesboro.	B. R. & P. R. R.
Yatesboro No. 1.	Armstrong.....	L. W. Robinson.	Punxsutawney.	James Craig.	Yatesboro.	
Yatesboro No. 2.	Armstrong.....					
Burnside Coal Co.	Clearfield.....			Thomas Ballis.	Burnside.	N. Y. C. & H. R. R. R.
Clearfield & Cambria C. & C. Co.	Clearfield.....					Pennsylvania Railroad.
Clearfield Nos. 1, 2 and 3.	Clearfield.....					Pennsylvania Railroad.
Wilson Run.	Clearfield.....					
Misher & Jose.	Clearfield.....					
Coalport Coal Co.	Clearfield.....	A. A. Stevens.	Tyone.	Geo. P. Bell.	Coalport.	Pennsylvania Railroad.
Superior.	Clearfield.....					
Weaver & Ettla.	Clearfield.....	George Scott.	Phillipsburg.	H. E. Weaver.	Clearfield.	N. Y. C. & H. R. R. R.
O'Shanter.	Clearfield.....					
Glasgow Coal Co.	Cambria.....			W. M. Williams.	Glasgow.	Pennsylvania Railroad.
Glasgow.	Cambria.....					
Joseph Smittle.	Cambria.....			Joseph Smittle.	Glasgow.	Pennsylvania Railroad.
Pleasant Hill.	Cambria.....					
Pecora Coal Co.	Cambria.....			Charles Lamb.	Glasgow.	Pennsylvania Railroad.
Mountaineer.	Cambria.....					
Fred. Bland.	Cambria.....					
Blands.	Cambria.....			Fred. Bland.	Elandsburg.	Pennsylvania Railroad.
Harbison-Walker Co.	Cambria.....	H. B. Errett.	Clearfield.			Pennsylvania Railroad.
Harbison-Walker.	Cambria.....					
Belwood Coal Co.	Cambria.....					
Great Bend.	Cambria.....	W. S. Bell.	Bellwood.			Pennsylvania Railroad.

Frick,	Max. Frick,	Cambria,	.....	Max Frick,	.....	Blandsburg,	.....	Pennsylvania Railroad.
Potts Run,	Potts Run Land Co.	Clearfield,	.....	G. C. Shults,	.....	.....	.....	N. Y. C. & H. R. R. R.
Berwindale,	Andrew Kennedy.	Clearfield,	.....	Andrew Kennedy,	.....	.....	.....	Pennsylvania Railroad.
Alpha,	Alpha Coal Co.	Clearfield,	.....	F. H. Seeley,	.....	Altoona,	.....	Pennsylvania Railroad.
Turner Run,	Turner Run Coal Co.	Clearfield,	.....	.....	.....	.....	.....	Pennsylvania Railroad.
Cheston,	Cresmer & Co.	Clearfield,	.....	A. F. Elder,	.....	Irvena,	.....	Pennsylvania Railroad.

TABLE II.—Gives the total number of tons of coal mined and tons of coke produced in each colliery, number of days worked, number of employees, number of employees killed and injured, number of kegs of powder, etc., used in the Twelfth Bituminous District for the year ending December 31, 1902.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in ton.	Total production of coke in tons.	Number of coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Rochester & Pittsburgh C. & L. Co.	Jefferson,....	486,119	31,025	2,750	1,022,537	237,405	700	277	1,180	....	....	2,606	6,500	70
Walston No. 3,	Jefferson,....	....	....	....	....	....	....	....	....	....	....	195	460	24
Walston No. 4,	Jefferson,....	....	....	....	....	....	....	....	....	....	....	....	....	....
Walston No. 5,	Jefferson,....	....	....	....	....	....	....	....	....	....	....	....	....	....
Elk Run shaft,	Jefferson,....	....	....	....	....	....	....	....	....	....	....	....	....	....
Adrian,	Jefferson,....	....	....	....	....	....	....	....	....	....	....	....	....	....
Florence No. 1,	Jefferson,....	933,195	30,700	5,250	1,261,162	166,694	476	265	1,661	8	52	6,000	8,700	53
Florence No. 2,	Jefferson,....	....	....	....	....	....	....	....	....	....	....	....	....	....
Eleanora No. 1,	Jefferson,....	....	....	....	....	....	....	....	....	....	....	....	....	....
Eleanora No. 2,	Jefferson,....	719,152	32,786	1,100	871,761	78,950	201	257	877	....	....	2,500	1,500	50
Eleanora No. 3,	Jefferson,....	....	....	....	....	....	....	....	....	....	....	....	....	....
Totals and averages,		2,148,486	94,511	9,100	3,155,800	483,579	1,377	206	3,718	8	52	11,295	17,109	197
Berwind-White Coal Mining Co.	Jefferson,....	156,851	4,293	138	161,282	....	....	250	192	....	....	2,000	2,500	32
West Eureka No. 4,	Jefferson,....	154,392	15,580	....	149,922	....	....	256	247	....	....	1,700	1,000	26
West Eureka No. 5,	Jefferson,....	....	....	....	....	....	....	....	....	....	....	....	....	....
West Eureka No. 6,	Jefferson,....	....	....	....	....	....	....	....	....	....	....	....	....	....
West Eureka No. 7,	Jefferson,....	....	....	....	....	....	....	....	....	....	....	....	....	....
West Eureka No. 8,	Jefferson,....	57,935	1,424	13	97,382	....	....	274	129	3	11	1,816	....	29
West Eureka No. 9,	Jefferson,....	....	....	....	....	....	....	....	....	....	....	....	....	....
West Eureka No. 10,	Jefferson,....	61,118	....	437	61,555	....	....	296	53	....	....	1,153	....	10
West Eureka No. 11,	Jefferson,....	....	....	....	....	....	....	....	....	....	....	....	....	....
West Eureka No. 12,	Jefferson,....	31,409	....	22	31,431	....	....	181	38	....	....	778	....	4
Totals and averages,		482,765	21,237	610	504,572	....	....	253	653	3	11	7,447	3,500	101

*Totals in this column are averages.

John McLeavy & Co., Conrad, Sholar,	Jefferson, Jefferson,	11,915 110,016	1,500	13 76	11,928 111,592	144 219	28 122	1 1	2 14
Totals and averages,		121,431	1,500	89	123,320	181	150	1 1	16
Clearfield Pitt. Coal Corporation. Caroco Ridge No. 1, Caroco Ridge No. 2, Caroco Ridge No. 3, Gazzam,	Indiana, Indiana, Indiana, Clearfield,	389,675 74,429	7,339 287	390 585	397,404 75,301	284 271	510 112	1 1	31 14
Totals and averages,		464,104	7,626	975	472,705	277	622	1	45
Urey Ridge Coal Co. Urey No. 1, Urey No. 2, Urey No. 3,	Indiana, Indiana, Indiana,	51,220 16,246 76,699	100 75	100 75	51,420 16,246 76,684	158 138 211	61 28 82	1 1	8 2 10
Totals and averages,		144,115	175	175	144,350	166	171	1	20
Greenwood Coal Co. Greenwood No. 10, Greenwood No. 11,	Indiana, Indiana,	27,126 108,846	90 1,435	785 963	28,001 111,272	172 219	59 149	1 1	7
Totals and averages,		135,972	1,523	1,778	139,273	195	208	1	7
Indiana Coal Co., Indiana No. 1, Indiana No. 2, Indiana No. 3, Indiana No. 4,	Indiana, Indiana, Indiana, Indiana,	60,181 40,759 11,351	1,368 250 100	510 120 20	62,053 41,129 11,371	229 196 163	118 58 11	1 1 1	10 6 2
Totals and averages,		112,191	1,718	630	114,559	182	187	1	18
Beech Creek Coal & Coke Co. Arcadia No. 1, Arcadia No. 2, Arcadia No. 3,	Indiana, Indiana, Indiana,	85,573 101,546 17,669	434 1,400	434	85,573 103,390 17,689	214 270 171	145 158 41	1 1 1	6 8 2
Totals and averages,		204,788	1,400	434	206,622	332	314	1	16
Clearfield & Cushman Creek C. & C. Co. Cushman Creek No. 1, Cushman Creek No. 2,	Indiana, Indiana,	29,169	125	29,294	179	179	54	1	65
Pennsylvania Coal & Coke Co. National No. 1, National No. 2,	Clearfield, Clearfield,	4,034	277	71,434	100	226	128	1	17

•Totals in this column are averages.

TABLE II—Continued.

Names of Operators and Collieries.		County.		Shipments of coal in tons by rail or otherwise.		Number of tons used for steam and heat at colliery.		Sold to local trade and used by employees—tons.		Total production of coal in ton.		Total production of coke in tons.		Number of coke ovens.		Number days worked.		Number persons employed.		Number fatal accidents.		Number non-fatal accidents.		Number kegs powder used.		Number pounds of dynamite used.		Number horses and mules.	
Irvona Coal Co.			Clearfield.																										
Irvona No. 3.			Clearfield.	96,693	2,000	400	161,148	39,330	100	*	194	261	...	5	610	40	20												
Irvona No. 4.			Clearfield.																										
Blaine Run Coal Co.			Clearfield.	66,893	360		61,193				232	110	1	...	400	...	9												
Blaine Run No. 1.			Clearfield.	26,009	139		29,150				299	36	...	...	100	...	2												
Blaine Run No. 2.			Clearfield.																										
Totals and averages.				80,892	430		81,343				229	146	1	...	500	...	11												
S. Hegarty's Sons.			Clearfield.	11,876			11,876				197	28	1	...	94	...	3												
Oakland No. 1.			Clearfield.	68,808	472	200	68,570				236	101	...	...	400	25	9												
Oakland No. 2.			Clearfield.																										
Totals and averages.				89,771	472	200	81,446				216	129	1	...	494	25	8												
Pease, Peterson & Kepp.			Clearfield.	75,262	100	124	75,617				235	84	...	...	...	...	11												
Bloomington Nos. 3 and 4.			Clearfield.	80,496	291	361	81,428				230	122	1	...	...	...	9												
Bloomington No. 5.			Clearfield.																										
Totals and averages.				156,319	391	425	157,045				232	206	1	...	...	...	20												
S. A. Rhin.			Jefferson.	18,000			18,000					60	...	...	90	...	11												
Walston No. 1.			Jefferson.																										
Kurtz & Rhin.			Jefferson.	125,000	400	200	135,600				300	100	...	...	2,100	...	24												
Walston No. 5.			Jefferson.																										

*Totals in this column are averages.

TABLE II—Continued.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employes—tons.	Total production of coal in ton.	Total production of coke in tons.	Number of coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Blands,	Cambria,	33,072	.....	170	33,242	.....	.....	• 310	45	.....	.....	520	.....	6
Harbison-Walker Co. Harbison-Walker,	Cambria, .....	.....	.....	720	†23,746	.....	.....	298	29	.....	.....	472	220	3
Great Bend,	Cambria,	60,828	.....	.....	60,828	.....	.....	255	73	.....	.....	350	800	5
Frick,	Cambria,	51,600	199	53	51,852	.....	.....	239	67	.....	.....	577	500	7
Potts Run,	Clearfield,	1,568	.....	.....	1,568	.....	.....	.....	18	.....	.....	.....	.....	2
Berwindale,	Clearfield,	1,515	15	90	1,620	.....	.....	98	11	.....	.....	25	.....	1
Alpha,	Clearfield,	4,000	.....	.....	4,000	.....	.....	91	12	.....	.....	.....	.....	.....
Turner Run Coal Co. Turner Run,	Clearfield, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cheston,	Clearfield,	580	.....	18	588	.....	.....	52	19	.....	.....	11	50	1
Grand totals, .....	.....	5,587,106	148,038	19,123	6,833,985	571,875	1,627	8,225	8,968	19	86	38,977	31,839	600

*Totals in this column are averages.
†The difference was used in furnishing fire brick.

TABLE II—Continued.

Name of Collieries.	County.	Number of Boilers.			Locomotives.			Total horse power.	Steam.	Air.	Electric.	Number steam engines of all classes.	Total horse power.	Number pumps delivering water to surface.	Capacity in gallons per minute.	Quantity delivered to surface per minute—gallons.	Number electric dynamos.	Number air compressors.
		Cylindrical.	Horse power.	Tubular.	Horse power.													
Rochester & Pittsburgh C. & I. Co.,	Jefferson.....	6	440	73	9,220	9,600	8	10	44	5,740	17,800	12,250	5,740	10	3,385	1,750	11	21
Berwind-White Coal Mining Co.,	Jefferson.....			16	1,815	1,815	1			4	460	3,385	460	1	150	649		3
John McLeavy & Co.,	Jefferson.....			6	685	685	2	3	5	2	320	1,750	320	4	750	649		1
Clearfield Bit. Coal Corporation,	Ind. & Ctbl.,			6	685	685	2	3	5		264	1,750	264	4	750	649		2
Grey Ridge Coal Co.,	Indiana.....			3	220	320	2	3	3		250	300	250	1	300	260		
Glenwood Coal Co.,	Indiana.....			3	220	320	2	3	3		250	300	250	1	300	260		
Indiana Coal Co.,	Indiana.....			1	60	60	2	3	3		140	300	140	1	300	260		
Beech Creek Coal & Coke Co.,	Indiana.....			2	140	140	2	3	3		140	300	140	1	300	260		
Clearfield & Cuth Creek C. & C. Co.,	Indiana.....			1	80	80	2	3	1		35	300	35	1	300	260		
Pennsylvania Coal & Coke Co.,	Clearfield.			4	200	200	2	3	4		210	300	210	1	48	36		
Blaine Run Coal Co.,	Clearfield.			1	60	60	2	3	2		4	35	300	4	48	36		
Blaine Run Coal Co.,	Clearfield.			2	120	120	2	3	2		4	35	300	4	48	36		
S. Hegarty's Sons,	Clearfield.			3	425	425	2	3	4		210	300	210	1	48	36		
Peale, Peacock & Kerr,	Clearfield.			3	425	425	2	3	4		210	300	210	1	48	36		
S. A. Rinn,	Jefferson.....			2	35	35	2	3	4		56	1	50	1	50	20		
Kurtz & Rinn,	Jefferson.....			2	35	35	2	3	4		56	1	50	1	50	20		
Williams Coal Co.,	Jefferson.....			1	25	25	2	3	3		1,400	14,000	1,400	1	14,000	100		
Gaskill Coal Co.,	Jefferson.....			9	16	16	2	3	3		1,400	14,000	1,400	1	14,000	100		
Clearfield C. & I. Co.,	Jefferson.....			6	900	900	2	3	3		1,400	14,000	1,400	1	14,000	100		
H. A. Bowers & Bro.,	Jefferson.....			1	80	80	2	3	3		1,400	14,000	1,400	1	14,000	100		
Reakirt Bros. & Co.,	Jefferson.....			1	80	80	2	3	3		1,400	14,000	1,400	1	14,000	100		
Logan Coal Co.,	Indiana.....																	
Gipsy Coal Co.,	Indiana.....																	
Ellsworth-Dunham Coal Co.,	Indiana.....																	
Cowanshannock Coal Co.,	Armstrong.			10	1,000	1,000	1	8	5		400	15,288	400	4	15,288	7,619	2	5
Burnside Coal Co.,	Clearfield.			10	1,000	1,000	1	8	5		400	15,288	400	4	15,288	7,619	2	5
Clearfield & Cambria C. & C. Co.,	Clearfield.																	
Mosher & Jose,	Clearfield.																	
Coalport Coal Co.,	Clearfield.																	
Weaver & Ettla,	Clearfield.																	
Glasgow Coal Co.,	Cambria.																	
Joseph Smittle,	Cambria.																	

TABLE II—Continued.

Name of Collieries.	County.	Number of Boilers.				Total horse power.	Locomotives.			Number steam engines of all classes.	Total horse power.	Number pumps delivering water to surface.	(Capacity in gallons per minute.	Quantity delivered to surface per minute—gallons.	Number electric dynamos.	Number air compressors.
		Cylindrical.	Horse power.	Tubular.	Horse power.		Steam.	Air.	Electric.							
Becaria Coal Co.,	Cambria,			1	40	40				1	40					
Fred Bland,	Cambria,															
Harbison-Walker Co.,	Cambria,															
Bellwood Coal Co.,	Cambria,															
Max Erick,	Cambria,															
Potts Run Local Co.,	Clearfield,															
Andrew Kennedy,	Clearfield,															
Alpha Coal Co.,	Clearfield,															
Turner Run Coal Co.,	Clearfield,															
Gresner & Co.,	Clearfield,															
Grand totals,		16	456	134	15,115	6,291	14		23	86	9,595	36	51,977	22,670	17	35

TABLE III—Showing the number of each class of employes at each colliery in the Twelfth Bituminous District during the year 1902.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.										Grand total, inside and outside.
		Mine foremen.	Assistant mine foremen.	Fire hoists.	Miners.	Machine runners.	Machine loaders.	Machine scrapers.	Drivers and runners.	Door boys and helpers.	Company men.	All other employes.	Total inside.	Superintendents.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	Trick employes.	Book-keepers and clerks.	All other employes.	Total outside.	
Rochester & Pittsburg C. & I. Co.																						
Waiston No. 3.	Jefferson.	1	1	1	65	25	247	9	26	4	31	.....	410	1	1	5	20	200	2	74	303	713
Waiston No. 4.	Jefferson.	1	1	1	15	4	32	2	9	2	6	.....	71	1	1	1	4	.....	.....	15	10	81
Waiston No. 5.	Jefferson.	1	1	1	12	5	71	5	9	.....	8	.....	102	1	1	3	1	.....	.....	9	14	116
Elk Run shaft.	Jefferson.	1	1	1	2	25	154	25	16	4	21	.....	24	1	1	3	10	.....	1	21	270	
Adrian.	Jefferson.	1	1	1	95	80	280	80	40	8	33	.....	619	1	1	8	12	169	1	36	840	
Flournoe No. 1.	Jefferson.	1	1	1	40	78	300	78	35	6	36	.....	776	1	1	6	1	.....	.....	28	45	821
Flournoe No. 2.	Jefferson.	1	1	1	15	.....	.....	2	2	.....	18	.....	18	.....	.....	.....	.....	.....	.....	1	1	10
Flournoe No. 3.	Jefferson.	1	1	1	39	31	351	30	40	11	15	.....	550	1	1	8	18	30	1	9	128	618
Eleanora No. 1.	Jefferson.	1	1	1	100	10	64	10	17	3	5	.....	210	.....	.....	.....	.....	.....	.....	.....	.....	210
Eleanora No. 2.	Jefferson.	1	1	1	100	10	64	10	17	3	5	.....	210	.....	.....	.....	.....	.....	.....	.....	.....	210
Eleanora No. 3.	Jefferson.	1	1	1	100	10	64	10	17	3	5	.....	210	.....	.....	.....	.....	.....	.....	.....	.....	210
Totals.		10	1	6	383	257	1,690	269	185	40	155	2,975	4	6	33	73	450	8	169	743	3,718	
Berwind-White Coal Mining Co.																						
West Eureka No. 4.	Jefferson.	1	1	1	153	.....	.....	.....	9	4	.....	8	176	.....	.....	4	5	.....	1	6	16	192
West Eureka No. 5.	Jefferson.	1	1	1	43	25	101	16	12	4	.....	20	223	.....	.....	5	10	.....	1	8	24	247
West Eureka No. 6.	Jefferson.	1	1	1	107	.....	.....	.....	6	1	.....	5	120	.....	.....	1	2	.....	1	5	9	129
West Eureka No. 10.	Jefferson.	1	1	1	43	.....	.....	.....	2	1	.....	2	48	.....	.....	1	1	.....	1	3	5	53
West Eureka No. 11.	Jefferson.	1	1	1	29	.....	.....	.....	2	1	.....	1	54	.....	.....	1	1	.....	1	1	4	38
West Eureka No. 13.	Jefferson.	1	1	1	375	25	101	16	31	10	.....	36	601	.....	.....	12	17	.....	5	21	58	659
Totals.		5	1	1	375	25	101	16	31	10	.....	36	601	.....	.....	12	17	.....	5	21	58	659

TABLE IV.—List of fatal accidents that occurred in and about the mines of the Twelfth Bituminous District for the year ending December 31, 1902.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan. 2	Michael Malone,	Irish,	Miner,	52	S.	....	....	Walston No. 3,	Jefferson,	Instantly killed by a fall of rock from a slip in the roof; the machine cutters were making a cut at the face of the room, and Mr. Malone was sitting at the rock, when, without any warning, the stone fell upon him; there was no one to blame, as the accident was an unforeseen one.
Feb. 10	Wm. Bickenstine, .	German, ...	Other employe,	53	M.	1	....	W. Eureka No. 6, .	Jefferson,	Killed by falling down shaft; he and some other men were working night shift, hauling coal up the shaft for the boilers at compressor plant; he had been down the shaft to tell the men not to send any more loads up until he had sent some empties down, and he went up the shaft, and instead of hoisting the empty cage he and another young man pushed an empty car into the shaft, and he fell with it and was killed; owing to the gate had been taken off, the cage was on the arms, and the cage that lifted it being immediately deceased seemed momentarily to have forgotten that the cage was still at foot of the shaft, and that the safety gate was off, and the accident was attributed to forgetfulness on his part, and it occurred about midnight.
24	Joseph Murrell,	Italian,	Machinescraper,	30	M.	1	....	Florence,	Jefferson,	Killed by coming in contact with trolley wire in mine; he and machine cutter had pushed the machine to the mouth of the room they had finished cutting, and the cutter told Murrell to go to the next room and see if it was ready for cutting, and he went up the heading, and as he

did not come back, the cutter went to look for him, and found him lying on the floor, at the mouth of the room, and from the appearance of the man, it appears he must have struck his head against the wire, as there was a mark on the temple. It was considered accidental, as the man had been accustomed to go in and out of the rooms, and knew the danger from the wire.

Killed by fall of slate; he and his brother were working in the neck of a room and had shot down a fall of coal, and while engaged in breaking some of the rock, and shivered it down, a slab of slate fell on both of them; the place was about ten feet wide, and this was the fourth cut they were taking out; the slate above the coal is full of slips, but they did not think it was dangerous, and so they did not set any props, and in this respect were a little careless, and then, again, the narrowness of this place was such that it seemed hardly possible for the slate to fall.

Killed by fall of coal; the machine cutter was taking a slip from the side of a room, and had started at a crosscut with a loose end, and had no sprags under the coal, and as they were cutting the third board, the coal fell away from a slip and caught Knapp; this accident was due to the men's carelessness in not securing the coal against falling, as at this point it was eight (8) feet thick.

Died from burns by gas and after damp; this man and his "buddy" worked in No. 9 room, 9th left heading, and after shooting down their fall of coal and loading mine car, Katsmarick went out into the heading and toward the face of the heading, and while proceeding he struck a wooden board across the heading as a danger signal, as gas had been found in a hole in the roof, and his lamp must have come in contact with this gas, for an explosion occurred and he was so badly burned and overcome with the after damp that his life was lost; this accident would not have occurred had he stayed in his own room and not gone where he had no business, as the barrier placed across the road was warning that he should not pass it.

Mar. 22 James Parks, English, ... Miner, 14 S. Yatesboro No. 1. Armstrong,...

May 23 Nelson Knapp, English, ... Machinestrapper, 19 S. W. Eureka No. 6. Jefferson,....

27 Andy Kalsmarick, ... Slav, Miner, 34 M. 1 2 Eleanor No. 2. Jefferson,....

TABLE IV—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
July	7 Dominic Micala,	Italian,	Miner,	36	M.	1	1	Walston No. 3,	Jefferson,	Killed by mine cars; both men were going to work in the mine on night shift, and instead of going down the traveling way, they disobeyed the rule and went up. The night trip was being pulled out, and as the car was going over the knuckle, the drawbar of a car broke, and the drag falling to hold the cars, they ran back down the slope, and the men were caught in the wreck that followed; this accident was due to the men's own carelessness.
	7 Joseph Basil,	Italian,	Miner,	41	M.	1	2	Walston No. 3,	Jefferson,	
19	Peter Shivot,	Italian,	Driver,	25	M.	1	....	Shollar,	Jefferson,	Killed by mine cars; he was bringing a loaded car from back heading into main heading, and the mules balked as they were going through the cross cut, and he blocked the car with a piece of wood, and as the mules started up again the car swung a little and the mule struck him on the temple, fracturing his skull, and he died the morning of July 21; no one was to blame for the accident.
31	Dominick Melack, ..	Italian,	Miner,	23	S.	....	....	Florence No. 1,	Jefferson,	Killed by coming in contact with trolley wire; he and some miners were coming along the heading from their work, and the motorman had left a portion of his loaded trip standing on the heading while he was collecting the rest of his trip, and this man, in trying to get ahead of his companions, took to the left side of the trip, and then tried to climb across between the cars, and in doing so he struck the trolley wire with his head, and when removed from between the cars he was dead; this acci-

Aug.	23	George Wesley,	English, ...	Miner,	21	S.	W. Eureka No. 10,	Jefferson.....	Killed by fall of rock; he had been working on a heading stump, and had finished his day's work and was bringing his tools from the face, when a rock fell from a slip in the roof, killing him; this accident was due to carelessness, as he knew the rock was loose and needed propping, and he failed to secure it.
	24	Michael Miney,	Slav,	Company man,	25	M. 1	Adrian,	Jefferson.....	Killed by fall of slate; this man and some others and the assistant were at work on Sunday, putting in cribs and props in No. 10, when a piece of slate started in some finished rooms, and this man and his "buddy" were setting props in the back heading under a piece of loose slate, and they had set one prop and were measuring with a tape line for the length of the next one, when, without any warning, the flag of slate broke away and fell on him; this was accidental and no one to blame.
Sept.	15	John Hieka,	Slav,	Miner,	20	S.	Burnside,	Clearfield....	Killed by fall of slate; he had started to turn off a room just finishing the vein and to make a new heading, he knocked out two props and was standing, and with his back to a flag of slate fell on him; this accident was due to his own carelessness, for he had been warned by one of his fellow miners that the roof was unsafe.
	30	Steve Hamata,	Hungarian...	Miner,	33	M. 1 2	Vates-boro,	Armstrong....	Killed by fall of slate; was working in main slope heading and they had loaded the coal from under the slate, and while trimming up the side a piece of slate fell from a slip and struck him; he was sent to the hospital and died October 5; no one was to blame, as the accident was unforeseen.
Oct.	11	Peter Johnson,	Swede,	Company man,	45	M. 1 5	Eleanor No. 2, ..	Jefferson.....	Killed by fall of roof; he and a companion were working down roof in heading and were instructed to use dynamite to break down the cross bars, and while his companion was making up a cart-ridge Johnson cut the prop supporting the cross bar to a feather edge, and while he was putting clay around the cartridge on top of the cross bar the roof, cross bar and prop all gave away, burying him under the fall; this accident was due to his own carelessness in cutting the prop.

TABLE IV—Continued

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Ave.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Nov. 11	Anthony Cavanaugh,	Pole,	Miner,	24	S.	.....	.....	Sykes' shaft,	Jefferson,....	Killed by fall of roof: I was in this room at 8 o'clock and told machine cutter to set a prop, and he did so; the miner shot down the coal after dinner, and knocked out the prop, and was loading his mine car, when a large piece of slate fell on him and he died in a few hours; this accident was due to his own carelessness, as his companion told him not to knock out the prop, but if he did, to take the slate down, but he was in too great a hurry to take it down.
11	Dern Palina,	Hungarian,...	Miner,	30	M	1	4	Glenwood No. 4, ..	Indiana,	Killed by mine car; this man and some companions were given a good ear to the car, and it was a little over a mile away, but as it did not run fast enough to suit them, they changed it for another one at the mouth of the tunnel, and this car had a defective brake, and in going through the tunnel the car got beyond their control, and all the men got out safely but Palina was caught between the car and the roof when the car jumped the track, and he died in a few hours; the men were to blame for this accident, for if they had used the car they started out with they would have been all right and safe.
Dec. 1	Vincent Molysack, ..	Pole,	Miner,	16	S.	.....	.....	National No. 1,	Clearfield,....	Killed by fall of slate; he and his companion were cleaning up along a side a heading stump, and he fell down the loose slate on the side, and as they were loading a mine car, a large body of slate gave way from a slip and fell on the boy, breaking both his legs

16	Herbert Harris, American,	Miner,	22	S.	Blaine Run No. 1,	Clearfield, ...	and crushing his pelvis; he died same day. Accident was due to their own carelessness, as they should have taken down the loose slate. Skull fractured; he and his brother were turning off a room and were taking down some ripping, and had pushed the car back a short distance; as the ripping fell, a piece struck his foot and he fell backward, striking back of his head on the iron bumper of the car; I think this accident would not have happened had they pushed the mine car further back.
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TABLE V.—List of non-fatal accidents that occurred in and about the mines of the Twelfth Bituminous District for the year ending December 31, 1902.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan.	6 John Catania,	Italian,	Miner,	22	S.	Walston No. 3,	Jefferson,.....	Burned by gas, instead of going to his own place, went into 12 left heading before the regular miners had completed work, and his lamp ignited a small body of gas; no one to blame but himself.
5	William Craig,	Irish,	Miner,	22	S.	Eleanora No. 2,	Jefferson,.....	Shoulder bone and leg broken by a fall of slate, due to his own carelessness.
20	James Hooley,	American, ..	Miner,	50	M.	Irvona No. 3,	Clearfield,...	Ankle bruised and two small bones broken by a fall of slate in heading, accident due to his not propping the roof or taking it down.
22	Park Sargent,	American, ..	Other employee,...	19	S.	Irvona No. 3,	Clearfield,...	Shoulder bruised while trying to put on brake on slope in mine, no one to blame for accident.
24	John Hammond,	American, ..	Other employee,...	30	S.	Adrian No. 1,	Jefferson,.....	Hand injured by being run over by car, due to carelessness.
29	Henry Williams,	American, ..	Miner,	30	S.	Oakland,	Clearfield,...	Carriage bone broken by fall of ripping, and due to carelessness.
Feb. 15	William French,	American, ..	Other employee,...	35	M.	Adrian,	Jefferson,.....	Bones in both hands broken, front ear of trip jammed the track, and last ear jammed against motor, and his hand caught against brake wheel, and was accidental.
17	Charles Loyd,	American, ..	Miner,	16	S.	Walston No. 4,	Jefferson,.....	Leg broken by fall of draw slate, and was due to carelessness.
24	Andrew Campbell,	Scotch,	Miner,	60	M.	Florence No. 1,	Jefferson,.....	Finger broken and hand hurt by fall of draw slate, due to carelessness.
25	Crabbie Hughes,	American, ..	Miner,	15	S.	Indiana No. 1,	Indiana,.....	Leg broken by fall of bone coal, accident due to his own negligence.
March 5	William Rhule,	English,	Miner,	55	M.	Florence No. 1,	Jefferson,.....	Squeezed about the tips by a fall of coal, and due to his own carelessness as he knew the coal was loose.
10	George Sivens,	English,	Miner,	17	S.	National No. 2,	Clearfield,...	Knock the knee, a piece of coal fell striking his pick into his knee, accidental.

12	James Madden,	American, ...	Machine loader,...	18	S.	West Eureka No. 6,	Jefferson,....	Hurt about the hips by fall of coal from a slip and was accidental.
14	William Speck,	Pole,	Machine scraper,	19	S.	Elk Run shaft,	Jefferson,....	Leg broken by fall of coal in a slip, and due to carelessness of machine cutter.
17	John W. Carr,	Scotch,	Miner,	40	M.	Florence,	Jefferson,....	Bone in leg broken, motor struck an iron rail lying along side the heading, and it struck him, accident due to his own carelessness.
19	John Lord,	American, ...	Other employe,...	19	S.	Florence,	Jefferson,....	Hand hurt, got his hand and arm between top of car and roof, due to his own carelessness.
20	George Day,	English,	Company man, ..	31	M.	Eleanora No. 2,	Jefferson,....	(Both men bruised about the body, in going down the slope in trip, the grip failed to catch and trip ran away, and injured both men, getting away carelessly, accident due to their own carelessness.
22	John Miller,	Scotch,	Company man, ..	35	M.	Eleanora No. 2,	Jefferson,....	Injured by fall of slate, at same time his brother was killed, and accident due to carelessness.
22	Warner D. H. Parks, ..	English,	Miner,	16	S.	Yatesboro No. 1, ..	Armstrong,...	Fingers cut by fall of coal, and due to his own carelessness.
25	Charles Richards,	English,	Miner,	52	M.	West Eureka No. 6,	Jefferson,....	Foot bruised, caught between cars, accident due to carelessness.
26	Eli Thomas,	Welsh,	Driver,	22	S.	West Eureka No. 6,	Jefferson,....	Burned on face and hands by gas which he ignited by his open light; gas was in a hole in the roof, accident was unavoidable.
23	Richard Cragg,	Irish,	Miner,	45	M.	Eleanora No. 2,	Jefferson,....	Bruised about face and right arm while loading timber in mine, the mule started up and he was caught by the timbers, and he was injured, accident due to his back broken by fall of slate, not fatal, while making undercut with a machine, he had a prop taken out and slate fell on him, the accident was due to his own carelessness.
26	Peter Galloway,	American, ...	Driver,	23	S.	Irvona No. 3,	Clearfield,....	Back hurt by fall of slate, it was accidental.
27	Paul Brokson,	Hungarian, ..	Miner,	27	M.	Yatesboro,	Armstrong,	(Both men slightly burned. Ruddlecock wanted to see if there was any gas in the hole where crags was burned, and he put his open light up to the hole and both were injured by a small body of gas that was there, accident due to his own carelessness.
May 1	Joseph Jeffrey,	Scotch,	Miner,	20	S.	Yatesboro,	Armstrong,	Emphysema of the lungs, was riding on electric mule and was squeezed against the ribs, accident due to his carelessness.
3	Alex. N. Ruddlecock, ...	Scotch,	Company man, ..	33	M.	Eleanora No. 2,	Jefferson,....	Leg broken by a fall of slate, due to his negligence in not propping.
5	Moses Madin,	English,	Company man, ..	40	M.	Eleanora No. 2,	Jefferson,....	Leg injured by empty car running over it, due to carelessness.
14	William Gustason,	American, ...	Miner,	18	S.	Florence,	Jefferson,....	Both legs broken by fall of rock, accident was unavoidable.
16	Axel Dickson,	Swede,	Miner,	34	M.	Yatesboro,	Armstrong,	
19	Salvatore Jusgent,	Italian,	Miner,	33	S.	Florence,	Jefferson,....	
22	Lewis Thomas,	American, ...	Miner,	23	S.	West Eureka No. 11.	Jefferson,....	

TABLE V—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
May								
22	Thomas Blainar,	Pole,	Miner,	26	S.	Sykes shaft,	Jefferson,....	Leg broken by a fall of coal, and due to carelessness on his part.
22	Matthew Sheddin,	English,	Driver,	28	M.	Penn No. 2,	Jefferson,....	Ankle hurt, car jumped the track and his foot was caught, accidental.
23	William Lawson,	English,	Miner,	25	S.	West Eureka No. 6,	Jefferson,....	Legs crushed by fall of coal, and due to his own carelessness.
27	Peter Gachink,	Slav,	Miner,	32	M.	Eleanora No. 2,	Jefferson,....	{ Overcome by after damp from explosion of gas in heading, and accident due to fault of another person.
27	Mike Topeck,	Slav,	Miner,	25	S.	Eleanora No. 2,	Jefferson,....	
27	Sam Ball,	American, ..	Driver,	32	M.	Eleanora No. 2,	Jefferson,....	Burned on face and hands same time as above accident, accident due to fault of another person.
June								
3	Steve Patchen,	Slav,	Miner,	42	....	West Eureka No. 6,	Jefferson,....	Burned on face and hands, thought his shot had missed fire, and went back to see and it went off and caught him, due to his carelessness.
4	Falk Fale,	Italian,	Miner,	18	S.	Florence No. 1,	Jefferson,....	Foot caught, caught between bumpers, and due to carelessness.
7	John Hopkins,	American, ..	Driver,	22	S.	Florence No. 1,	Jefferson,....	Leg bruised by car jumping the track, no one to blame.
12	Harry Earnest,	American, ..	Miner,	19	S.	Florence No. 1,	Jefferson,....	Foot squeezed while getting out of the way of runaway trip, accidental.
14	Harry Hunt,	English,	Miner,	14	S.	Eleanora,	Jefferson,....	Leg broken by fall of loose coal, was avoidable if coal had been taken down.
20	Con Donovan,	American, ..	Miner,	19	S.	Florence,	Jefferson,....	Fingers injured by timbers on trip, and was due to carelessness.
23	Wallace Broadburt, ..	English,	Miner,	25	S.	Adrian,	Jefferson,....	Arm broken, empty car was thrown against the rib by being struck with loaded car, no one to blame for accident.
26	Steve Bunt,	Italian,	Miner,	15	S.	Florence,	Jefferson,....	Hands injured by fall of draw slate, and was due to carelessness.
28	Sigmund Powskey,	Russian,	Company man, ..	40	M.	Elk Run shaft,	Jefferson,....	Head cut and two ribs broken by fall of slate, accident was avoidable.
July								
8	Joseph Stephens,	Hungarian, ..	Miner,	25	S.	Florence No. 2,	Jefferson,....	Head cut and back hurt by runaway car in heading, and was unavoidable.

9	Clad Bowser,	American, ...	Miner,	19	S.	Eleanora No. 2, ...	Jefferson,	[All were burned by explosion of powder trip in mine, and one of the men had a can of powder, and in some unknown way it exploded, burning all of them, and was due to carelessness. Injured internally, was caught between car and prop, was unavoidable. Ends of two fingers cut off, was caught be- tween brake beam and prop, and was due to carelessness. Leg bruised, was caught by motor, due to his own carelessness. Scalp wound by falling slate, and due to carelessness. Burned by mine lamp, and due to his own carelessness. Leg badly crushed, was cutting rope from loaded trip, and cars jumped the track and wrecked, accident due to careless- ness. Leg fractured and pelvis broken, he tried to jump on motor trip in heading, and was caught between motor and rib, ac- cident due to his own carelessness. Foot hurt, he jumped in between cars of motor trip, and cars came together and caught his foot, accident due to careless- ness. Leg broken by fall of bone coal, accident unavoidable. Hurt by mine cars while riding on loaded trip, due to carelessness on his part. Leg and collar bone broken, car jumped the track and knocked out a prop and cross timber, and slate fell on him, was due to his own carelessness. Heel bruised, his foot caught in a frog, and mine car ran on his foot, accident due to carelessness. Leg broken by mine cars, his foot caught between car and rail, was unavoidable. Leg broken, he broke his right off too short, and before he could get far enough away the shot went off, and coal struck him, accident due to care- lessness on his part. Arm and collar bone broken by cross bar breaking, was unavoidable. Arm broken, car door fell on his arms, and was accidental.]
	James Sashal,	American, ...	Door boy,	14	S.	Eleanora No. 2, ...	Jefferson,	
	Mark Vashal,	Slav,	Miner,	45	M.	Eleanora No. 2, ...	Jefferson,	
	Dan. Vashal,	Slav,	Miner,	14	S.	Eleanora No. 2, ...	Jefferson,	
11	James Flanigan,	Scotch,	Driver,	21	S.	Elk Run shaft, ..	Jefferson,	
15	Steve Chicomicok,	Slav,	Miner,	23	S.	Penn No. 2,	Jefferson,	
21	Henry Resce,	American, ...	Company man, ..	38	M.	Elk Run shaft, ...	Jefferson,	
22	Steve Stankovitch,	Pole,	Miner,	14	S.	Frick,	Cambria,	
24	Henry James,	American, ...	Door boy,	14	S.	Florence No. 1, ...	Jefferson,	
25	Gitan Grantolu,	Italian,	Other employe, ..	40	M.	Florence No. 2, ...	Jefferson,	
Aug.	8 Robert Goldridge,	American, ...	Runner,	17	S.	Florence No. 1, ...	Jefferson,	
	12 John McCune,	American, ...	Miner,	17	S.	Adrian,	Jefferson,	
23	Fred Johnson,	Finlander, ...	Miner,	35	M.	Walston No. 3,	Jefferson,	
25	Daniel Flanigan,	American, ...	Miner,	33	S.	West Eureka No. 4, ..	Jefferson,	
30	Roscius Senian,	Italian,	Miner,	33	M.	Walston No. 3,	Jefferson,	
Sept.	4 Millia Senian,	Italian,	Miner,	26	M.	Walston No. 6,	Jefferson,	
	12 Samuel Madili,	American, ...	Runner,	17	S.	Florence No. 2,	Jefferson,	
16	Steve Falke,	Hungarian, ..	Company man, ..	18	S.	West Eureka No. 6, ..	Jefferson,	
27	Carmal Orego,	Italian,	Miner,	20	S.	Yatesboro,	Armstrong, ..	
Oct.	6 William Fomeroy,	English,	Miner,	57	M.	Shollar,	Jefferson,	
	7 Sam Shuman,	Italian,	Miner,	55	M.	Adrian,	Jefferson,	

TABLE V—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Oct.	10 Amos Myers,	American, ..	Miner,	22	S.	Adrian,	Jefferson....	Pelvis fractured by a fall of coal, and due to his own carelessness. Burned on face and hands charged shot setting off a can of powder, accident due to his carelessness. Leg broken, while jumping on cars, he slipped, no one to blame. Leg broken by fall of roof, accident due to his neglect to place the timber. Burned on hands and face after firing a shot, he had a little gas burning, and tried to put it out with compressed air, and flame came back on him, no one to blame.
15	Orin Pierce,	American, ..	Miner,	22	M.	Gazzam,	Clearfield....	
22	David Wilson,	American, ..	Miner,	21	S.	Adrian,	Jefferson....	
22	J. A. Arnold,	American, ..	Miner,	41	M.	Frick,	Cambria....	
20	Mandus Olson,	Swede,	Company man, ..	26	M.	West Eureka No. 6	Jefferson....	
Nov.	3 Sadie Hitchhins,	Welsh,	other employe, ..	26	S.	West Eureka No. 6	Jefferson....	
5	Thomas Wilkinson,	English,	Company man, ..	58	M.	Irvona No. 3,	Clearfield....	Foot injured. Shoulder and arm cut, these men were timbering and had secured the roof as they thought, but it fell on them, no one to blame for accident. First joint of finger cut while trying to couple cars, accidental. Arm broken and injured, he was gone several days, and with a trip of cars could not get enough slack to pull the pin, and in jumping to one side he struck against the rib, then was thrown against the cars, accident unavoidable. Body squeezed, was caught between car and rib, and due to his own carelessness. Leg broken by a fall of slate, no one to blame for accident.
5	James Hooley,	American, ..	Miner,	45	M.	Irvona No. 3,	Clearfield....	
11	William Johnson,	Swede,	Door boy,	13	S.	Bloomington No. 5,	Clearfield....	
14	Philip Spevht,	German,	Company man, ..	30	M.	Walston No. 4,	Jefferson....	
17	Archle Perry,	Italian,	Driver,	18	S.	Walston No. 3,	Jefferson....	
28	Axel Sealand,	Swede,	Machine loader, ..	13	S.	Yatesboro No. 1, ...	Armstrong, ..	

Dec.	5	William Lumbull,	Welsh,	Miner,	18	S.	West Eureka No. 6,	Jefferson,	Foot crushed by fall of coal, no carelessness on his part.
	11	Edward Evasky,	Russian,	Miner,	16	S.	Elk Run shaft,	Jefferson,	Leg bruised, fell from front of empty trip, and car run over his leg, carelessness.
	18	Adam Yancosky,	Pole,	Miner,	25	S.	Adrian,	Jefferson,	Three toes broken by fall of coal, and was accidental.
	18	Salvatore Chenone,	Italian,	Miner,	60	M.	Adrian,	Jefferson,	Foot crushed, mine car run over it, and due to his own carelessness.
	22	Frank Grant,	Italian,	Miner,	40	M.	Yatesboro,	Armstrong,	Hip dislocated, was struck by a fall of coal, and due to carelessness.
	30	Theodore Schwarz,	American, ...	Other employe, ...	22	S.	Florence No. 2,	Jefferson,	Leg cut and body bruised, was motorman, and taking in a load of boards in mine bumped against them with such force, that one of the boards struck him on the leg, accident due to his own carelessness.

Blower



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